REPORT RESUMES

ED 014 119 CG 001 032

A TASK ORIENTED COURSE IN DECISION-MAKING. INFORMATION SYSTEM FOR VOCATIONAL DECISIONS, PROJECT REPORT NUMBER 7.
BY- WILSON, EUGENE H.
HARVARD UNIV., CAMBRIDGE, MASS.

PUB DATE APR 67

EDRS PRICE MF-$0.75 HC-7.20 178P.

DESCRIPTORS- GRADE 9, DEMONSTRATION PROGRAMS, *DECISION MAKING, JUNIOR HIGH SCHOOLS, PROGRAM EVALUATION, *COURSE CONTENT, PREDICTION, EXPERIENCE CHARTS, *INFORMATION SYSTEMS, *VOCATIONAL DEVELOPMENT, TEACHERS, COUNSELORS, *JUNIOR HIGH SCHOOL STUDENTS, READINESS FOR VOCATIONAL PLANNING, BASIS FOR CHOICE

A COURSE IN DECISION-MAKING, BUILT AROUND THE TIEDEMAN-O'HARA PARADIGM, WAS TAUGHT AT A JUNIOR HIGH SCHOOL TO TEST MATERIALS. THE THREE ESSENTIAL ASPECTS OF TEACHING DECISION-MAKING ARE--(1) LEARNING THE LANGUAGE OF THE DECISION-MAKING PROCESS, (2) PRACTICING DECISION-MAKING WHILE UNDER SUPERVISION, AND (3) FORMULATING CRITERIA FOR A DECISION. A BOOKLET, "YOU, THE DECIDER," CONTAINING RELEVANT THEORY, ACTIVITIES, TASKS, AND CASES RESULTING IN EXPLICIT CRITERIA FOR CHOICE WAS GIVEN TO STUDENTS. WEEKLY WORKSHOPS FOR TEACHERS WERE HELD SIX WEEKS BEFORE THE COURSE BEGAN. A SHARING OF COMPETENCIES BY RESEARCH PERSONNEL, COUNSELORS, AND TEACHERS TOOK PLACE AT THE WORKSHOPS, WHICH WERE CONTINUED THROUGH FOUR WEEKS OF ACTUAL TEACHING. RESOURCE MATERIALS INCLUDED THE "OCCUPATIONAL OUTLOOK HANDBOOK" AND KATZ'S "YOU, TODAY AND TOMORROW." RESULTS OF THE EVALUATION OF THE COURSE ARE NOT PRESENTED, ALTHOUGH A DEFINITE RESEARCH PROGRAM HAS BEEN DESIGNED. A COPY OF "YOU, THE DECIDER" AND VARIOUS EVALUATION INSTRUMENTS ARE INCLUDED. (SK)

ED014119

INFORMATION SYSTEM FOR VOCATIONAL DECISIONS

Project Report No. 7

A TASK ORIENTED COURSE IN DECISION-MAKING

Eugene H. Wilson

This paper was supported in part by Grant No. OEG-1-6-061819-2240 of the United States Office of Education under terms of the Vocational Education Act of 1963.

Graduate School of Education
Harvard University

April, 1967

CG 001 032

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

A TASK ORIENTED COURSE IN DECISION-MAKING

Eugene H. Wilson
Graduate School of Education
Harvard University

Throughout the initial planning and implementation stages, the concept of teaching decision-making has been central to the objectives of the Information System for Vocational Decisions. This project paper describes the initial efforts of our staff to write and to teach a course in decision-making built around the Tiedeman-O'Hara paradigm as modified by our own attempts to describe it in the language of students. The purpose of this project paper is to describe briefly the circumstances surrounding the teaching of decision-making at Bigelow Junior High School in Newton, Massachusetts, and to describe what will occur in the way of evaluation. Results of the evaluation itself are not considered to be within the scope of this paper. In summary then, the purpose of implementing a course in decision-making with students was to test materials in actual practice with students, and to gain the experience that is obviously encountered in such a task.

The central idea in this unit on decision-making is that "the purposing of behavior requires not only the teaching of its percepts, but also the application of the paradigm under the supervision of one trained to the goal." (p. 168, Tiedeman, 1964a)

The concept of purpose involves two related characteristics of people: (1) a "sense of agency", that is, seeing oneself as an agent in his own behalf, capable of acting on his environment; and (2) actually acting on his environment through the process of making decisions.

Tiedeman has supposed that persons can become more purposeful through education, but has realized that achieving the actuality of acting more purposefully requires something more than teaching. In his words, that something more is "application of the paradigm under the supervision of one trained to the goal." Another way to characterize these two aspects of purpose is to relate them to the duality of thought and action. Since the process of decision-making bridges the gap between thought and action, the problem of facilitating its learning must be concerned with both theoretical learning of its language and its application in action. All good teaching seeks to influence action as well as thought, but since decision-making is seen as the means through which the scholarly disciplines effect action, it is imperative that any system of teaching decision-making include provision for the extension of learning from thought into action.

Consideration of these issues leads to the conclusion that decision-making may be considered to have been taught if: (1) a language of decision-making has come to be a part of the person's vocabulary; (2) awareness of using the substages of decision-making is generalized to other kinds of decisions being made; and (3) if the person is able to make explicit his own criteria for choice.

Thus a complete system of teaching decision-making is seen as including provision for three kinds of activities:

a. learning the language of the process of decision-making.

b. practicing decision-making under the supervision of a teacher or counselor.

c. making explicit ones own criteria for choice.

To provide for these three essential aspects of the system, we developed the following materials and procedures which were used in the program at Bigelow, and are part of this project paper:

A. For Students:

1. A booklet called "You, the Decider" which was written specifically for ninth grade students at Bigelow Junior High School, Newton, Massachusetts. This booklet contains the relevant theory of decision-making, written in ninth grade language, and contains the following table of contents:

Chapter I: The Decision-making Process

Chapter II: Information

Chapter III: Interpretation and Prediction

Chapter IV: Cases in Point

Appendix A: Experience Tables

Appendix B: Excerpts from Bulletin No. 13, Newton High School

Appendix C: Opportunities in Secondary Education at Newton High School

Appendix D: Registration Card for Newton High School

Appendix E: Suggestions to Teachers

Appendix F: Data Given to Students

2. A task which is required of all ninth grade students at Bigelow is that of filling out the registration card for Newton High School. A series of handouts supplements the more theoretical aspects of the booklet with relevant action-requiring tasks. The most important of these is a series of four cases which was discussed in class, if possible. Each student filled out a registration blank as if he were the person in the case. After filling out the registration blank, the student was asked to specify his criteria for choice. (Use of the case material was optional and thus varied from teacher to teacher.)

B. For Teachers:

1. Weekly workshops were held for six weeks prior to the beginning date of the teaching. Materials were written by the research staff but freely modified as a result of interaction with the other teachers. The weekly sessions were essential to the success of the system and were continued through the four weeks of actual teaching. A three-way sharing of competencies has been most beneficial.
   Research personnel: theoretical knowledge of decision-making and entire structure of unit.
   Counselors: Options at high school, test interpretation, understandings of ninth grade student problems and dynamics.
   Teachers: relevance of materials and illustrations, relationship of decision-making to existing disciplines, teaching methods.

2. Beyond the materials prepared for student use, we furnished certain materials to be used as resource materials by each teacher.
    a. "Occupational Outlook Handbook."
    b. NVGA's "The Teacher's Role in Career Development."
    c. Tiedeman and O'Hara's "Choice and Adjustment."
    d. Wilson's special paper, "A Critical Review of Theory and Research on the Teaching of Decision-making during Adolescence and Young Adulthood."
    e. Copies of documents relating to Palo Alto's research in teaching decision-making.
    f. Katz's "You, Today and Tomorrow."

SUMMARY

In summary, the major aspects of this system consist of:

1. A booklet containing the relevant theory.
2. Associated activities and tasks related to filling out the Newton High School registration blank.
3. A series of four cases resulting in an explicit criteria for choice.
4. Trained teachers with associated resources.

Although no test in existence is able to measure "purposefulness" as such, we developed the following means of evaluating the effectiveness of the system.

1. A student evaluation sheet was completed at the end of the teaching period. This instrument will test the extent to which

the language of decision-making was learned by the student. It will test the accuracy of student perceptions of such major concepts as: decision, decision-making, decision-point, exploration, evaluation, clarification, alternative course of action, information, outside information, inside information, test score, percentile, quartile, ability, interest achievement, value, goal, etc. This evaluation was used only as a posttest since it is assumed that ninth grade students have no prior knowledge of the language of decision-making per se.

2. Gribbons' Readiness for Vocational Planning (as adapted by Wilson for group, paper-and-pencil administration) was used to determine the extent to which knowledge of specific educational opportunities at Newton High School are incorporated into the students' overall occupational and educational planning.

This instrument was administered before and after the teaching period since ninth grade students are assumed to have accumulated some knowledge about the educational opportunities open to them. Before and after scores will be tested for significant gains by the t-test for means a la Edwards chapter 7.

3. A Basis for Choice instrument was used to indicate shifts in criteria for choice as students gave consideration to the issues involved in the planning of a tenth grade course of studies for each of four hypothetical cases and finally for themselves.

4. An interview will be held with two students randomly selected from each of the seven divisions. These semi-structured interviews will be tape recorded, transcribed, and analyzed to determine the extent to which the student has generalized his learnings about decision-making to other areas of his life.

5. Teachers and counselors who have participated in the planning and implementation of the system will be invited to evaluate the system on the following dimensions:

a. importance of task

b. relevance of written materials

c. sequence of topics and tasks

d. attitude toward continuation of process

As soon as the evaluation phase of this project has been completed, we anticipate issuing another project report which will describe the results of the evaluation and any conclusions which have been drawn from the total experience.

YOU THE DECIDER

INFORMATION SYSTEM FOR VOCATIONAL DECISIONS

Co-authors:

Diana Kronstadt

Eugene H. Wilson

This project was supported by the
United States Government Grant No. 1-061819-2240
Department of Health, Education, and Welfare
Office of Education

Graduate School of Education
Harvard University

March, 1967

This book is the personal property of ______________________________

YOU, THE DECIDER

Table of Contents

Introduction

Chapter I: The Decision-making Process

Chapter II: Information

Chapter III: Interpretation and Prediction

Chapter IV: Cases in Point

Appendix A: Experience Tables

Appendix B: Exerpts from Bulletin No. 13, Newton High School

Appendix C: Opportunities in Secondary Education at Newton High School

Appendix D: Registration Card for Newton High School

Appendix E: Suggestions to Teachers

Appendix F: Data Given to Students

Appendix G: Testing Instruments

- Readiness for Vocational Planning
- Self-Rating of Abilities, Interests, and Values
- Basis for Choice
- Student Evaluation Sheet

ACKNOWLEDGEMENTS

The authors are indebted to David V. Tiedeman and Robert P. O'Hara for making it possible to produce this booklet through the support of the Information System for Vocational Decisions. Much of the material elaborated in these pages is based upon their work and that of their former students Martin Katz, Warren Gribbons, and Frank Field. Terence J. O'Mahoney and Pat Ferrone contributed much to this booklet in the early drafts of chapters one and two. Dorothy Kunberger and James McDade assisted with the preparation of chapters three and four and provided a vital link with teachers and students at Bigelow Junior High School.

The work of Harry Gelatt, Bill Yabroff, and Barbara Varenhorst of Palo Alto, California, has been studied with profit and is partly responsible for the decidedly local orientation of these materials.

Without the active support of Charles Brown and Edward Landy of the Newton School Department it would not have been possible to try out the materials in the classroom. David Clemens collected the data from official records for use on the "Some Personal Facts" sheet, and Tom Hutchinson did the statistical analyses for the "Experience Tables". Arthur Kroll furnished several sets of occupational information for use in each homeroom.

The authors wish to express appreciation to the following members of the faculty at Bigelow Junior High School for their enthusiasm, cooperation in planning, implementing, and evaluating the ideas found in this booklet: Robert Frost (Principal), Walter Beevers, Donna Carleton, Roger Clark, James Hartman, and Nelson Nugent.

INTRODUCTION

The Information System for Vocational Decisions is sponsored jointly by the Newton School Department and the Graduate School of Education at Harvard University. The "Information System," as we shall call it, is a three-year project which is concerned with helping students in making better decisions.

In order to teach about decision-making we need to give consideration to an important decision which every student must make and cannot avoid. Planning next year's program involves such a decision, and we have selected it as the central task on this unit of decision-making.

Four Social Studies class periods will be devoted to decision-making each week for four weeks. The teacher will be one of the regular Bigelow English-Social Studies teachers, one of Bigelow's counselors, or a staff member from the Information System.

In addition to this booklet, each student will receive materials designed to fit into the binder, and each homeroom will contain specific kits of occupational information.

CHAPTER 1: THE DECISION-MAKING PROCESS

Decisions

We all make many decisions every day of our lives. Let's look at a list of decisions. You'll probably find things you do without ever thinking of these as "decision-making behavior." You'll be able to see that decisions are an ever-present part of everybody's life. Some examples are:

1. What to have for lunch?
2. Which movie to see?
3. Studying or playing football after school?
4. Taking a date to the dance or going alone?
5. Whether to spend your money on new clothes or save it?
6. Spending the summer working, going to camp, or summer school?
7. Whether to take French, Latin, shop or home economics in the ninth grade?

There are probably many more examples you could add to this list that would illustrate some common decisions you may make.

Actually it's encouraging to realize that we are capable of making decisions and that we do make them all day long. We can make things happen instead of just sitting back and letting things happen to us.

This Booklet

This booklet was written to help you get the most out of your decisions by helping you improve your skills in making decisions. You can begin applying these new skills in planning your high school program.

It is very important that you realize that you are in charge of the decisions to be made. This booklet, along with your parents, counselors, and teachers, will give you some helpful ideas about how good decision-making occurs. They will also influence your decision, but the final responsibility is yours.

The Process

Decisions don't just happen. All decisions are the end product of a process of decision-making. In more common and automatic decisions we often aren't aware of this process at all, but in the more complicated and serious decisions we do think and mull over our decisions.

The process of decision-making begins with your awareness of an approaching decision-point. In other words you can see that the need for a decision will be arising at some future time. The end of the process is marked by acting upon one of the alternative courses of action. In between the beginning and end of the decision-making process there are several activities that occur. These are Exploration, Evaluation, Choice, and Clarification.

So here is what the decision-making process looks like.

1. Decision-point
2. Exploration
3. Evaluation
4. Choice
5. Clarification
6. Action

We'll spend the next sections of this chapter describing these decision-making activities in greater detail.

Decision-point

A decision-point is exactly what it sounds like; it is a point in time at which you experience a need for a decision. The importance of a decision point varies from person to person and from situation to situation. What may be a very serious decision-point for one person may be quite commonplace and unimportant for another.

For example, John is taking his first trip to New York. His parents are going to let him decide how he wants to get there. What means of transportation will John decide upon? John is facing a decision-point. He must decide whether to take the train, bus, or plane. This is a serious decision for him. On the other hand, John's older sister Lisa goes to New York quite often. When she reaches the decision-point of choosing her means of transportation, she decides quickly and without much thinking since she has made the decision many times before. Lisa's decision-point was not such a serious one for her.

You probably experience a need to decide many times in the course of a day. Some of these decision-points are so common that you may not even be aware of having "made a decision."

For example, when you're getting ready for school and see that it has snowed during the night, you decide to wear your snow boots without too much consideration.

Other decision-points which you encounter may be very critical and may require lots of thought and planning. These decision-points can't readily be worked out automatically. Knowing about how the decision-making process operates and gaining skills in decision-making will help you deal with these more important decision-points.

The need to select your program for the tenth grade is a decision you're facing now. You'll spend a good deal of time figuring out the courses that are best for you. So this is a decision-point that won't be worked out as quickly or automatically as the decision to wear boots when it is snowing.

Alternatives

When we talk about "alternatives" in decision-making, we mean nothing more than the courses of action available in that particular situation, to that particular person.

When you reach a decision-point, you'll stop to consider your alternatives. You'll decide which direction you will take of the directions available.

As John was deciding which way to get to New York, his alternatives were: bus, train, or airplane. Actually John had eliminated the alternative of going by car because he doesn't have a car nor can he drive.

If there is snow on the ground and you have to decide on wearing snow boots, you actually have two alternatives--wearing boots or not wearing boots.

If you think about the decision-point of selecting your high school program, you'll realize that there are quite a large number of alternatives open to you. During this unit on decision-making, you'll have a chance to learn about these alternatives and about yourself, too, so that you can evaluate these alternatives in view of your own interests, abilities, and values.

The Decision-making Process

Exploration

Exploration is the term we use to describe the initial activities of decision-making. The dictionary defines exploration in the following way: "traveling in a region previously unknown in order to learn about its natural features and its inhabitants." The way in which we talk about exploration is much like the dictionary definition. Instead of talking about just exploring the physical world, however, our kind of exploration includes the world of ideas, work, imagination, school, memory, and experiences. For this kind of exploring, you don't need to set out on a safari. You can explore from your school desk or arm chair.

So exploration in terms of the decision-making process is the activity which involves thinking about all of the possibilities related to a decision-point; a person is exploring when he thinks about the alternatives open to him in his situation.

Looking at our example then, you have a decision-point: selecting your tenth grade program. To explore the problem, the following kinds of questions may occur to you:

> What subjects do I have to choose from?
>
> What kinds of activities are involved in studying algebra?
>
> What other activities are available at the high school in addition to courses?

These are the kinds of questions that are considered exploring. A good place to start exploration is with the requirements of the situation. The booklet on Newton's senior high schools will give you these requirements for your present curriculum decision. We'll spend the next chapter talking about different kinds of information as it relates to your decision.

Evaluation

Evaluation begins when you start making clear in your own mind what is involved in the alternatives open to you. A person is said to be evaluating the alternatives when he begins thinking of them in terms of his own special needs, abilities, interests, and values.

In evaluation you assess the advantages or disadvantages of each alternative and begin eliminating some of these as not being right for you. So your field of alternatives is being narrowed.

In terms of your decision-point in Newton, the following may occur to you in evaluation:

What if I choose math and science? What are the benefits?

In order to go to medical school, must I take Latin?

What are the advantages of the industrial arts course?

I think I'd like French, but how will I do?

In evaluation you'll probably be asking these kinds of questions. Most of them cannot be answered with too much certainty. You will want to utilize your own past experiences and those of others too. We'll give you ideas about how you can predict some things about yourself in relation to the Newton situation in the later chapters.

Choice

The next portion of the decision-making process we call choice. This is the point at which you have finished sifting and narrowing all the things that might be possible for you to do. So now you are ready to choose. Choice, in the special way that we use it, is still tentative and not at all final. Don't forget that all this is happening in your mind; you are thinking about what you are going to do. The real decision isn't made until you begin acting. Maybe we can make this special meaning for choice clear by an example. When you're playing checkers, you may think about your move for quite a while. When you finally "choose" which checker to move, you may move it, but leave your hand on it while you look around and make sure you have made the best possible move (or choice). And so it is with our particular meaning for choice. You think you know what it is you want to do, but you also want a chance to check it out.

Again back to your Newton situation. A student who is in the choice part of the decision-making process may be concerned about the following:

> I think maybe I want the technical program, but what will this mean to me in five years?
>
> I'm pretty sure that I want to begin French, but I still wonder if I should take Latin instead.

> Yes, I think I'm going to take college preparatory program, but I'm not positive.

Clarification

The last major area of the decision-making process is called clarification. If we go back to the example of playing checkers, clarification goes on while you look around and make sure you have made the best possible move. Actually clarification means examining your choice to see if it is what you really want. At this time you will be able to assure yourself of your decision and get rid of any remaining doubts you may have about it.

Some kinds of questions you may ask in regard to your tenth grade planning in the clarification period are as follows:

> I am going to take the business major, but I guess I'll look at the courses again to make sure.
>
> I'll take two languages, but will it be too much for me?

We can see then that this period of clarification is readying you for action. Remember that no real decision has occurred until you begin to act. When you fill out your program for tenth grade, you will have actually made your decision. What you do after that will be considered as carrying out your decision. This will be what you do when you are taking the curriculum you have selected.

CHAPTER 2: INFORMATION

Information and Decisions

Making a blind guess and just taking someone else's advice are not wise decisions. To be an effective decider, you will utilize your own decision-making skills. A good way to begin acquiring these skills is to base your decisions on facts and information.

"Facts" are raw data. These facts become "information" when they have some meaning for you personally. An example may help you see the difference.

Suppose a friend told you he had 8 rupees in his pocket. Now you know a fact about him, that he has 8 rupees. This fact doesn't mean anything to you unless you know the exchange rate for rupees. The fact becomes information when you find out that 1 rupee is worth 21 cents in American currency. Then your friend's statement about having 8 rupees changes from empty fact into meaningful information. You know he has

$1.68 worth of American money.

Information serves as the basis for all decisions. Without information a person could not make a decision at all. It would be only a stab in the dark. Actually, how well you make a decision depends on two things:

1. Do you have enough of the right information?
2. How well can you use this information in the decision-making process?

Okay then, let's look at some things you'll want to know before you'll make your decision at Newton.

What kinds of information do you need?

To help you make your decision for your tenth grade program, you will probably need three kinds of information:

--about yourself

--about the courses open to you next year

--about educational and occupational opportunities

To get this information, it is necessary to ask the right questions. Let's see how this works by looking at a real problem.

Frank is a ninth grader at Bigelow Junior High School. He hasn't given much thought to his future but has mentioned that he might like to go to college. Now it's time for him to decide on a tenth grade curriculum. Do you think you could make any good suggestions to Frank?

You can probably think of a lot of things you might want to know about Frank. Obviously, we don't have enough information yet. Here are some questions you might want to ask about Frank.

1. How good a student is Frank? What are his chances of succeeding in the different high school programs? What are his chances of getting into college? This is a question about Frank's ability; how much and what kind of ability does Frank have?

2. How hard is Frank willing to study?

3. Why does Frank think he might want to go to college?

4. What school subjects and activities does Frank like best? This is actually a question about Frank's interests.

There may be other questions you may want to ask about Frank, but these are a good place to begin.

Now that we have all this information, are we ready to give Frank advice?

No, we really need some more information, don't we? We know all about Frank's decision-point but not about his alternatives. We have to know all about what is available to Frank at Newton High School.

Okay, let's suppose we have all the answers about Frank. We know about the kind of person he is. We know all about what's open to Frank at Newton High. We know about educational and occupational opportunities available for him in the future.

Are we now ready to advise him?

No. If we have helped Frank get and use all this information for himself, Frank really doesn't need our advice. Now he can make his own decision. He is the only one who can. Others may tell him what they think he should do, but he is the one who will have to do it. It is his decision.

From the above example, you can see that we can talk about different kinds of information--inside and outside information.

Inside information consists of information about you that is meaningful to the specific situation. Inside information is not just facts about yourself. It is made up of what and how you think about yourself in relation to certain situations. The kinds of facts that you may convert to inside information are facts about your abilities, interests, and values.

Here is a simple example of how inside information may influence one of your decisions. Suppose you have been given an assignment in science class. The teacher has given you the choice of writing a report or constructing a model of some kind. Which will you decide to do? Do you see yourself as having more writing ability or as having more ability in building things? This assessment of yourself provides you with some inside information which will influence your decision.

Outside information consists of facts about the situation which have relevance for your decision. In terms of the decision you are facing now, relevant outside information could include facts about the Newton high schools, facts about the courses open to you, facts about how other students in Newton have made their decision. Outside information would also include some things about educational and occupational opportunities in your future.

Let's take a look at these two categories of information in more detail.

INSIDE INFORMATION

Abilities are usually defined as what you can do. Each of you has many abilities which lie in different areas. Remember though that abilities are not the same as interests. An example will show you how abilities and interests differ but still may be tied together.

Andy was very interested in basketball but lacked the athletic ability to play. Andy did have mechanical ability though and using this, he took charge of the score board at all the basketball games. And so Andy was able to satisfy his interest in basketball by using his special mechanical abilities.

Many different kinds of abilities contribute to the ability to do well in school. Reading ability is important but so are other kinds of abilities like being good at handling numbers.

How do you Judge your Abilities

Feedback from your environment often provides you with material with which to judge your abilities. This "feedback" is a process by which you learn more about yourselves from what others think about you. These others can be your parents, your friends, your classmates, and your teachers.

School marks are feedback which represent what your teachers think you have earned after a long period of sizing up and testing your performance. Standardized tests of ability also provide you with feedback about yourself.

Here is an example of how feedback works. Suppose you are driving a car for the first time. As you drive down the street, cars begin honking at you. You assume you must be doing something wrong on the basis of the feedback, the cars honking.

How do you see your Abilities

The following is a check list of some school abilities. Check the ones which you think best describe you.

My ability in math is probably:		in English:	
Below average	______	Below average	______
Average	______	Average	______
Above Average	______	Above Average	______

Besides these special abilities, like being a good athlete or a whiz at math, we can speak of general scholastic ability, which means just what it says. It refers to the broader capacity to do school work. (As we mentioned, however, this capacity is actually based on a number of abilities.) This general scholastic ability is especially important in making your decision at Newton. The more general scholastic ability you have, the easier most of your school work is for you, and the higher your marks are likely to be in all your school work.

How would you rate yourself on general scholastic ability?

Below average ____

Average ____

Above average ____

Interests

Interests are what you like to do. They are like tastes. Some of us like chocolate ice cream while others prefer strawberry. If you enjoy dancing or cooking or playing basketball, we say that that activity is interesting to you. You enjoy it for its own sake.

Interests, along with abilities and values, will play an important part in all your decisions. You probably feel pretty sure that you know what you like or what your interests are. But there are also many things you haven't tried, and so you can't really say if you like them or not. If someone offered you papaya ice cream, you probably wouldn't know if you liked it or not. Some of you would jump at the chance to try something new while others would probably stick to your old favorites.

School Interests

During your school years you have many chances to develop new interests. New school subjects and school activities offer a great chance to try new things or enjoy ones you already know you like.

List the school subjects you like most:

________________________ Why? ________________________

________________________ Why? ________________________

________________________ Why? ________________________

List the school subjects you like least:

________________________ Why? ________________________

________________________ Why? ________________________

________________________ Why? ________________________

You may want to compare your likes and dislikes in school subjects with your abilities in these subjects. Often we do best in those things that we really enjoy.

Interests influence your career

Knowing your interests can help you eventually decide on a career in which the work will interest you; but, as we have mentioned, good decision-making depends on using the right information in the best possible ways. Interests are very important, but they have to be considered along with other kinds of information too.

For example, you may think it would be very interesting to play professional football, but may not have the needed athletic ability.

There may not be any occupation that will completely interest you. There are likely to be some things in each occupation that you won't enjoy doing and few occupations that will satisfy all of your interests. Probably a large number of occupations will satisfy some of your interests. You may plan to satisfy the "leftover" interests in recreational activities or hobbies. Sometimes one kind of interest is so strong for a person that he may devote all his time to it. For example, an artist may make his living by painting, but his leisure time may be spent in reading books on art or attending art lectures.

Can you think of any specific activity involved in the following occupations which would be particularly interesting or uninteresting to you?

	interesting	not interesting
Artist	__________	__________
Astronaut	__________	__________
Business Executive	__________	__________
Carpenter	__________	__________
Doctor	__________	__________
Electrician	__________	__________
Engineer	__________	__________
Folk Singer	__________	__________
Lawyer	__________	__________
Mechanic	__________	__________
Nurse	__________	__________
Professional Athlete	__________	__________
Radio Announcer	__________	__________
Reporter	__________	__________
Salesman	__________	__________
Secretary	__________	__________
Social Worker	__________	__________
Teacher	__________	__________
Test Driver	__________	__________

Your Interests and Your Decision

Then it seems as if it will be necessary for you to be aware of your interests in making many decisions.

Right now you have a very specific decision to make regarding your high school program. Your interests will no doubt influence this decision. This can happen in two ways: (1) your school interests (in terms of which subjects you like) will play a role in your final decision about your tenth grade program; and (2) your interests in general are influencing the kinds of occupations you may be considering for the future, which is also influencing the courses you choose. For example, if you think you'd like to be a doctor, this means college, of course. You'll have to take a curriculum that will prepare you for college.

You will be taking a type of interest inventory which will help you sort out your present interests and may help you become aware of some interests you hadn't been clear about.

Values

Values are defined as attitudes that determine what you will do. Your values are closely related to your goals, and the way you look at things. Your values determine what is really important to you.

Values in Decision-making

You've probably noticed by now that when you want one thing, you often have to give up something else to get it. You can't go to a picnic and to the movies at the same time. You can't study effectively for a test and watch TV at the same time.

Then you may ask yourself, "When is it that I am willing to work hard at something?" There are probably two answers to this question. One is when you like the activity itself; this would refer to one of your interests. Another reason you may work hard at something is because it is a way of getting something you really want. This reason refers to your values.

If a value means what something is worth to a person, we can measure its strength (its value to him) by what he is willing to do, or pay, or give up for it. Let's take an example that will show you how values operate in an everyday decision.

Jerry wants a new transistor radio. He is able to earn the money by shoveling snow or working in his uncle's store. He's not really interested in either of these jobs but decides that getting his radio is worth a few days of work.

Let's say he had to work several months for the radio. Do you think that it would be worth it to Jerry? Or if he had to work at a job he really hated like dishwashing, would the radio be worth it to him? We can see how much the radio is worth to Jerry by how much he will put up with in order to get it.

Can you think of something you wanted enough to work hard for or give up something else for?

What you wanted and why you wanted it is a clue to one of your values. You can measure its strength by how hard you worked or how much you gave up to get it.

You can measure the strength of your educational values in the same way. How hard are you willing to work for them? What will you give up to get them? For example, will you take a subject you don't especially like (it is definitely not an interest) in order to reach a future goal, like getting into a top college or getting a special job?

In making your decision for your tenth grade program, you will have to weigh the values of the alternatives open to you against each other. (This is what we call "evaluation.")

How do abilities, interests, and values work together in decision-making?

One of the really important decisions you eventually make will be deciding your future occupation. The occupation you "decide" on now, or the one you think you might go into does not have to be final. Your future occupational decisions will be made up of many smaller ones along the way. One of these contributing decisions is the one about your tenth grade program. Each of these smaller decisions is based on things you know now about your abilities, interests, and values. These decisions are influencing your occupational goal. Also because you have some occupational goal in mind (although it may not be very clear), this goal is influencing your more common decisions.

Here's an example. Tom is thinking about becoming a chemist.

He thinks he has the ability since his grades in general are good. Tom places a lot of importance on security, and he knows there is a demand for chemists. He has really liked all his science courses, and so Tom has a real interest in chemistry, too. Tom takes lots of chemistry and science courses in high school. If Tom enjoys them and gets very good grades, his goal of becoming a chemist will be strengthened. But Tom's experiences in high school were different. He found high school chemistry boring and became very interested in music instead. He learned to play the clarinet and became active in the school band. He got to know his band teacher very well. At this time Tom began thinking of studying music in college and becoming a music teacher. This too may not be Tom's final decision.

OUTSIDE INFORMATION

As we mentioned earlier in this chapter, besides needing information about yourself, you'll need outside or situational information to be used in your decision-making.

If we consider your decision-point to be the need to decide on a tenth grade program, then you must know what alternatives and opportunities will be open to you. These are described in a booklet which we will give you which is specifically designed to let you know what your alternative courses of action are for the tenth grade.

Occupations and Education

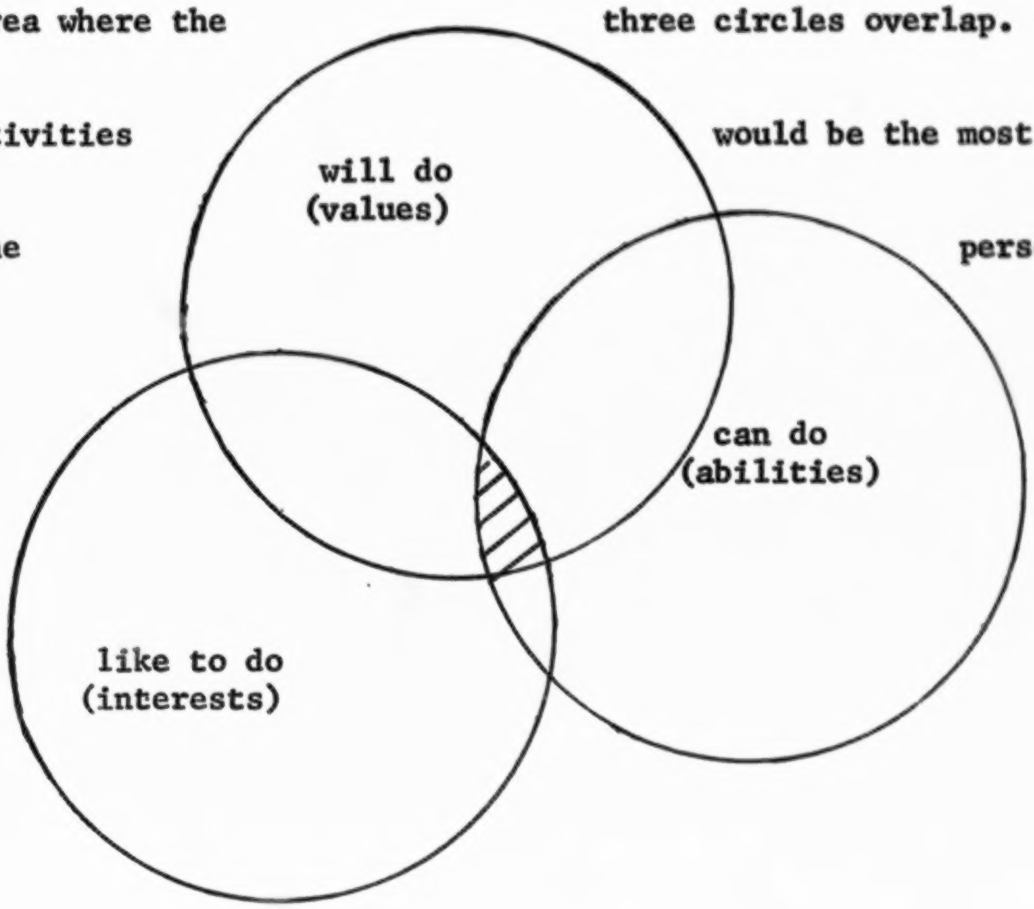
Why should you be interested now?

You may think that you're not ready to choose an occupation now. You may also feel that you have plenty of time before you have to decide. Actually, this is true. But how will you be prepared to choose your occupation or range of occupations from the thousands available? How could you be sure that you'll have the right educational backgrounds for the one of the many occupations you might select? You can see that you have to start making some plans or at least begin thinking about the future.

There is a file drawer of occupational information and educational requirements in your homeroom. A few weeks ago you were asked to fill out a sheet listing your first three occupational choices. In these file drawers there is available to you information on all these occupations and many, many more as well.

Relationship of Interests, Abilities, and Values

A simple diagram of three circles shows the relationship between interests, abilities, and values. We have defined interests as being related to what one _likes_ to do, abilities to what one _can_ do, and values to what one _will_ do. Some kinds of activities would fall in the shaded area where the three circles overlap. Ideally, these activities would be the most satisfying to the person.


will do
(values)
can do
(abilities)
like to do
(interests)

CHAPTER 3: INTERPRETATION AND PREDICTION

In the last chapter we talked about the importance of information in decision-making. If you are going to base your decision on information that is relevant to that decision, you'll need to know:

1. How to get the right information
2. How to use it

This is really a question of turning facts into meaningful information. An important source of facts about yourself is test scores. In order for test scores to be helpful though you have to use them correctly and understand just what they can mean to you. This process is actually turning the test scores which are "facts" into "information" which can then be utilized in the decision-making process. This translation is called test interpretation.

STANDARDIZED TESTS

The standardized tests you'll be concerned with in this unit are those dealing with your abilities including intelligence. Remember we said that abilities refer to what you can do.

You can't accurately measure your abilities the way you can measure your height or weight. You can, however, get a good idea of where your abilities lie from test scores. But to do this you'll need to understand what the test is all about and what your score means.

Standardized tests of ability are put together by trying out questions in a certain area of ability like math on a large group of students like you.

Try to always keep in mind that a test score is not precise nor absolute. It is not like measuring the length of a table with a ruler. You could take another standardized test in the same area (like math) and score higher or lower. In fact, your scores might vary a great deal. If you take many tests in the same area, you have more to go on, even though the scores may vary from test to test.

For example, if Jim beats Fred 9 out of 10 races, you could probably say that Jim has greater running ability than Fred for that distance, even though Fred did beat Joe in one race.

From this you can see how difficult it is to measure ability with accuracy. Tests of ability cannot tell you what to do, but you can take them into account in making your decision. *You* will have to evaluate your test scores and determine how you will use them. (In addition to ability test scores, the school marks you earn will help you evaluate your ability too.)

The above discussion of standardized tests has actually been concerned with interpretation of test scores. "Interpretation" refers to helping you to understand what the test score means.

On your personal fact sheet there are test scores for the STEP tests and for Intelligence tests. Let's look more closely at these now.

The STEP Tests

You took the STEP tests in the eighth grade in Reading and in Math. The STEP Test measures how well you use the things you have learned in school. The better you understand a subject, the easier it will be for you to solve new problems in that subject. These STEP Tests were given to you to see how well you can work in these areas (Math and Reading), not how fast you can work.

The Reading section of the STEP Tests is designed to measure how well you are able to do the following things:

1. Remembering what you read.

2. Picking out new ideas from what you read.

3. Determining what the writer's aims and attitudes are.

4. Picking out different writing styles.

5. Suggesting improvements in what the writer says.

The Math section of the STEP Tests measures things you had been learning in your math classes since you started school. This part of the STEP Tests measured how well you are able to do the following kinds of things:

1. Handling numbers by adding, subtracting, multiplying, and dividing them.

2. Using math symbols like "percent" or "equal."

3. Working problems in measurement and geometry.

4. Working problems in functions and relations (these include ratios).

5. Reasoning out problem sets by using logic.

6. Working with graphs and charts.

The skills measured by the STEP Tests can be improved. Your score will give you an idea how you compare in these skills with other students in Newton and those in the United States. You can decide if you want to work at improving these reading and math skills.

Intelligence Tests

Intelligence refers to the capacity we have for learning. It involves acquiring and retaining new knowledge but also responding successfully to new situations or problems by utilizing past experience or knowledge. A person may be considered to be acting with intelligence when he uses reason to solve problems and direct his actions effectively.

The purpose of Intelligence Tests is to measure this mental ability or thinking power. It's important for you to realize that it is not possible to measure mental ability directly. Mental ability is measured indirectly by its effect in acquiring new knowledge. Intelligence Tests are made up of questions which depend as little as possible on the amount or kind of schooling you have. These questions try to get at mental ability which is not dependent on schooling but rather on thinking power. Of course, this is difficult to do and to some extent what you've learned in school will affect your score on intelligence tests.

TEST INTERPRETATION

There are three terms which are important for you to learn about in order to understand test interpretation. The test scores on your personal fact sheet are reported in "percentiles" and quartiles" which are based on a comparison of scores with a "group."

Percentiles

Percentiles are a way of talking about test scores so that they make more sense to you. Percentiles allow you to see your test score in comparison to other students who took the same test. Percentiles range from the 1st percentile to the 99th percentile.

An example may help you see more clearly how percentiles work in test interpretation. Suppose you had a percentile rank of 80 on a standardized test. This means that your score is higher than eighty percent of the students in your group. At the same time twenty percent of the students in your group got a higher score on this test than you did.

Quartiles

Sometimes test results are reported in quartiles rather than percentiles. Actually quartiles are groupings of percentiles into 4 categories. Since percentiles range from 1 to 99 and when these are "quartered" or divided four ways, the result is four quartiles. These are:

1st quartile: This means your score is higher than 75 percent (or three quarters) of the students in that group.

2nd quartile: If your score lies in this quartile, this means that your score is higher than 50 percent (or 2 quarters or ½) of the group.

3rd quartile: This means that your score is higher than 25 percent (or one quarter) of the students in your group.

4th quartile: If this is where your score is, this means that your score may be higher or lower than other people in this quartile. The most you can say about your score is that 75 percent (or 3/4) of the group scored higher than you.

Norm Group

As mentioned above, a test score doesn't mean much by itself.

Using percentiles to report test scores means that the test score is compared to the test scores of other students who took the test. These other students compose the norm group on which percentiles are based. Your test scores on your personal fact sheet are reported on the basis of two kinds of norm groups:

1. Local norm group--the percentile on your fact sheet called the local percentile ("lopr") is based on all the students in Newton who took that test at that time.

2. National percentiles ("napr"), the other kind of percentile on your fact sheet, is called the national percentile. This percentile is based on a sample of all the students in the United States who have taken that particular test.

Let's see how norm groups can make a difference in test interpretation.

Suppose that Jane, a 9th grader at Bigelow, wanted to know her score on the Reading section of the STEP tests. She finds out that she has scored in the 50th percentile based on a national norm group. This means that her score is higher than 50 percent (or ½) of the students who made up that norm group. Now Jane sees that her score on this test based on local of Newton percentiles is in the 40th percentile. According to this local percentile Jane's score is higher than 40 percent of the students in Newton who took this test. The same test score was a higher percentile based on a national group than it was based on the local Newton group. You can assume then that in general the Newton group scored higher on this test than the national norm group. If Jane wanted to compare her score to a group of 9th graders in South Carolina, it is likely that the percentile based on this norm group would be even higher than her percentile based on the national norm group. This is so because in general students in the south (as a group) score lower on standardized tests than those nationally or in Newton.

You can see then that the norm group on which your test score is based can influence the percentile ranking a great deal. If you want to interpret your test scores most efficiently and get the most information from them, you will need to take into account these effects of the different norm groups.

PREDICTION AND DECISION-MAKING

Weighing Risks: All your lives you'll be making lots of decisions without being absolutely sure of the outcome, and so no matter how sure you are about one outcome, there is still some chance for the unexpected to happen. You'll probably want to weigh the possible risks involved with each of your alternative courses of action.

In other words, what do you stand to lose from one outcome? What do you stand to gain from another? How important are the possible gains or losses to you? Let's look at an example.

Suppose Ann wants to go to the beach. She hears the weatherman say that there is a 1 out of 10 chance for showers. (This means that in the past when weather conditions have been like this, it has been clear 9 times out of 10.) Ann will probably decide that her day at the beach is a "good risk." The odds are strongly in her favor.

Let's suppose that the weatherman had forecast 9 chances out of 10 for showers. Even though Ann was very anxious to go to the beach she might decide to spend the day doing something else since she could be somewhat certain that it will probably rain.

Of course, Ann could have taken a chance and gone anyway. She'd be accepting the risk. What if the forecast had been 5 chances out of 10 for showers? How would that help Ann decide?

Actually there is no forecast or prediction that can tell us what to do. What it does is supply information that helps you decide. It gives you an idea of the risk involved. The amount of risk, though, may have different meanings for you depending on what you stand to gain or lose and what is really important to you. (This is a question of your values:)

If Ann had to go near the beach to see her grandmother who was ill, rather than for fun, how would the weather forecast affect her plans? Although risks of the weather forecast remained the same, she'd probably change her decision and go. (Here her values would be playing a part in her decision.)

You can see then that the information you get from a prediction or forecast is only part of making a "good" decision. Much depends on the chances in our favor and the risks involved. But remember that your goals and the things that are most important to you also determine how you handle the risks involved in your alternative courses of action.

Risks and Your High School Program

In deciding which high school courses or program to take, you will want to consider your chances of success or failure. You'll also want to consider how serious failure would be for you and how important it would be for you to succeed.

In looking at each of the alternative opportunities available, you'll probably want to ask:

What are my chances of success or failure?

How much do I risk if I fail?

What do I gain if I succeed?

Some things might be so important to you that you would want to try for them even if the risks were great.

Experience Tables and Risks

Experience Tables are designed to show you what happened to students like you in high school courses and after high school. This booklet contains tables for you to use. Your use of experience tables can help you predict the risks which may be ahead for you.

CHAPTER 4: CASES IN POINT

Jerry

Jerry is fourteen years old and is in the ninth grade. In getting ready to register for grade ten at Newton High School he has reviewed his record of the past two and a half years and has done some thinking about some "outside" and "inside" information.

Jerry's school marks and test scores are shown on the attached copy of "Some Personal Facts." He felt very good about the "A" in seventh grade math but now realizes that other factors such as study time and interest are preventing his earning a higher mark in Algebra. Foreign languages are almost a lost cause for Jerry, and he wonders seriously whether he should attempt to continue with Latin, but he is not sure if he can go to college if he doesn't.

As he looks at his STEP scores, Jerry wonders about the difference between the local percentiles and the national ones. Are Newton students really that much smarter than the average for the whole country?

Will this help him get into a good college or hurt him? He wonders if he should go to college at all, but he thinks of the many times his parents have urged him to think about it. They seem to think he won't amount to anything unless he can go to a "good" college, but Jerry is not really sure if they are right or even what a "good" college is.

The last time he talked to his counselor, Jerry raised the question of whether he should think about going to college, but the counselor wasn't too helpful about it. He suggested that many students with abilities about like Jerry's got into college, but many of them find it difficult and drop out.

Although his parents frequently complain about how much it will cost to send him to college, Jerry is convinced they can afford it if he really does make it. Besides he has almost a hundred dollars saved up from doing odd jobs around the neighborhood. He could save more, he knows, but he likes to play basketball and baseball too much and he sometimes dreams of becoming a professional athlete.

What kind of a program should Jerry plan for grade ten? Should he consider himself a "college-prep" student? Or should he try to prepare himself to go to work right after high school? What preparation is best for a job in selling? Should he become a salesman? These questions and many others kept bothering Jerry as he thought about filling out the registration card for Newton High School. What should he do? What would you do if you were in his place?

INFORMATION SYSTEM FOR VOCATIONAL DECISIONS
Harvard University
220 Alewife Brook Parkway
Cambridge, Massachusetts 02138

SOME PERSONAL FACTS

Name: Jerry

Division: ____________

These data were obtained from your official records. You can use these facts to help you in this decision-making unit. If you find any mistakes on this sheet, please let your teacher know.

School Marks:	7th Grade (year average)	8th Grade (year average)	9th Grade (marking periods)
English	C	C	C
Social Studies	C	C	C
Science	C	B	B
Mathematics	A	B	C+ (algebra)
French	fair	dropped	D- (Latin)
Home Economics			
Industrial Arts			

Intelligence Test Scores:	3rd Grade		6th Grade		8th Grade	
	*lopr	**napr	lopr	napr	lopr	napr
First Quarter						
Second Quarter						✓
Third Quarter					✓	
Fourth Quarter						

*lopr: local percentile ** napr: national percentile

STEP Scores: (Sequential Tests of Educational Progress) taken in 8th grade

	local percentile band	national percentile band
Reading	29-48	70-85
Mathematics	27-53	62-85

STEP scores see the appropriate sections of the decision-making booklet.

SELF-RATING SCORING SHEET

Name: Jerry

Date: March, 1967

	Comparison with Others	Self Ranking
Interests:		
Outdoor	1.....25.....50....[✓ 75]....99	
Mechanical	1.....25.....50....[✓ 75]....99	2
Computational	1.....25....[✓ 50]....75.....99	
Scientific	1.....25....[✓ 50]....75.....99	
Persuasive	1.....25.....50.....75....[✓ 99]	1
Artistic	1....[✓ 25]....50.....75.....99	
Literary	1....[✓ 25]....50.....75.....99	
Musical	[✓ 1]....25.....50.....75.....99	
Social Service	1.....25.....50.....75....[✓ 99]	3
Clerical	1....[✓ 25]....50.....75.....99	
Values:		
Theoretical	1....[✓ 25]....50.....75.....99	
Economic	1.....25....[✓ 50]....75.....99	3
Aesthetic	[✓ 1]....25.....50.....75.....99	
Social	1.....25.....50.....75....[✓ 99]	2
Political	1.....25.....50.....75....[✓ 99]	1
Religious (optional)	1....[✓ 25]....50.....75.....99	
Abilities:		
Verbal Reasoning	1.....25....[✓ 50]....75.....99	1
Numerical Ability	1.....25.....50....[✓ 75]....99	2
Spatial Relations	1.....25.....50....[✓ 75]....99	3
Mechanical Reasoning	1.....25....[✓ 50]....75.....99	
Intelligence	1.....25....[✓ 50]....75.....99	

Pam

Pam's best friend, Diane, is making Pam's registration for tenth grade difficult. These girls have been very close ever since they entered school. In elementary school they had the same teachers and when they entered junior high they were placed in the same seventh grade division at the recommendation of their sixth grade teacher. She thought they were "good for each other."

Pam is a quiet, shy girl whose looks are just so-so. In a crowd she would never be noticed. But she is a bright girl who does very good work in the classroom and on her tests. She hates to get up in front of the class because she lacks confidence. On the other hand Diane is a pretty, popular and outgoing type who could have her choice of "best" friends, but she sticks to Pam. Diane has trouble in understanding her math and science, but Pam helps her everyday because they do their homework together and the telephone gets lots of "wear and tear." Pam was recommended for Illinois math by her seventh grade math teacher but decided not to take it because she knew Diane was not eligible.

Now at the second marking period of the ninth grade, Pam's grades are all A's and B's. In spite of the help she receives, Diane is struggling hard to keep a C to D average. The two girls have discussed registration for Newton High School. Diane knows she cannot possibly do the work demanded of the courses in Curriculum I. The quality of Pam's work indicates that she has the ability to succeed in Curriculum I courses. Both girls have talked about wanting to stay together in high school.

Diane is trying to talk Pam into selecting Curriculum II courses. Pam enjoys using her mind and is also getting pressure from her parents to prepare herself for a liberal arts college. On the other hand, her loyalty to Diane and the fact that she will be lost socially without Diane, causes Pam to hesitate in her decision.

INFORMATION SYSTEM FOR VOCATIONAL DECISIONS
Harvard University
220 Alewife Brook Parkway
Cambridge, Massachusetts 02138

SOME PERSONAL FACTS

Name Pam

Division: ____________

These data were obtained from your official records. You can use these facts to help you in this decision-making unit. If you find any mistakes on this sheet, please let your teacher know.

School Marks:	7th Grade (year average)	8th Grade (year average)	9th Grade (marking periods)
English	B	C	B
Social Studies	C	C	B
Science	C	C	B-
Mathematics	A	B	B (algebra)
French	S	fair	B+
Home Economics			
Industrial Arts			

Intelligence Test Scores:	3rd Grade		6th Grade		8th Grade	
	*lopr	**napr	lopr	napr	lopr	napr
First Quarter						✓
Second Quarter					✓	
Third Quarter						
Fourth Quarter						

*lopr: local percentile **napr: national percentile

STEP scores: (Sequential Tests of Educational Progress) taken in 8th grade

	local percentile band	national percentile band
Reading	54-75	88-98
Mathematics	18-39	50-74

STEP scores see the appropriate sections of the decision-making booklet.

SELF-RATING SCORING SHEET

Name: Pam

Date: March, 1967

Comparison with Others

Interests:

		Self Ranking
Outdoor	1.....25.....50.....75....[✓ 99]	3
Mechanical	1....[✓ 25]....50.....75.....99	
Computational	1.....25.....50....[✓ 75]....99	
Scientific	1....[✓ 25]....50.....75.....99	
Persuasive	1.....25.....50....[✓ 75]....99	
Artistic	1.....25.....50.....75....[✓ 99]	1
Literary	1.....25.....50.....75....[✓ 99]	2
Musical	1.....25.....50....[✓ 75]....99	
Social Service	1.....25.....50....[✓ 75]....99	
Clerical	1....[✓ 25]....50.....75.....99	

Values:

Theoretical	1.....25.....50....[✓ 75]....99	3
Economic	1....[✓ 25]....50.....75.....99	
Aesthetic	1.....25.....50.....75....[✓ 99]	1
Social	1.....25.....50.....75....[✓ 99]	2
Political	1.....25.....50....[✓ 75]....99	
Religious (optional)	1.....25.....50.....75.....99	

Abilities:

Verbal Reasoning	1.....25.....50.....75....[✓ 99]	1
Numerical Ability	1.....25.....50....[✓ 75]....99	2
Space Relations	1.....25....[✓ 50]....75.....99	
Mechanical Reasoning	1.....25....[✓ 50]....75.....99	

Intelligence 1.....25.....50.....75....[✓ 99]

Frank

Mrs. Jones sat in the outer room of the Guidance Office. She was not happy, and this was apparent to anyone who took the trouble to observe her worried face. She was mentally reviewing the events of last night.

Her son, Frank, had presented a blue registration sheet which contained his choice of subjects for the tenth grade at Newton High School. Frank had not talked with his parents about what he wanted to take next year but had said that he was involved in a program at Bigelow that was supposed to help him make better decisions. Now he had decided and asked his mother to sign her name on the line reserved for "Parental Approval." She looked at the sheet and became angry.

His program was the following:

021	Physical Education Boys 1
121	English II 1
420	Introduction to Western Tradition II 1
521	Mathematics II 1
885	Technical Drawing 1
908	Driver Education

She asked him, "What about your French? Are you going to throw away a whole year of work in French? What about meeting the college requirements for a foreign language? This program won't get you into college."

Frank insisted that there were colleges he could get into without any foreign language background. He said his counselor had told him so. In addition, he said he hated French and didn't want to waste his time on it when he could be working on something he really liked.

Frank's "Personal Facts" sheet shows that he has above average general scholastic ability. His "Reading" scores are average when compared with other Newton students and definitely above average when compared with national norms. His "Math" scores are considerably higher than his "Reading" scores.

Frank's parents want him to go to a four-year college. Frank, himself, seems to have some interest in the field of nuclear physics.

Frank and his mother have an appointment to talk to the counselor. What compromises do you think can be reached? Keep in mind all the information you have about Frank, including his own interests and his parents' expectations. Fill out a registration sheet for Frank that will not close any doors to his own plans or even his parents' expressed hopes that he will go to college.

INFORMATION SYSTEM FOR VOCATIONAL DECISIONS
Harvard University
220 Alewife Brook Parkway
Cambridge, Massachusetts 02138

SOME PERSONAL FACTS

Name: Frank Division:

These data were obtained from your official records. You can use these facts to help you in this decision-making unit. If you find any mistakes on this sheet, please let your teacher know.

School Marks:	7th Grade (year average)	8th Grade (year average)	9th Grade (marking periods)
English	C	B-	C
Social Studies	C	B	C
Science	B	B	C+
Mathematics	C	B (U.I.)	B (algebra)
French	fair	unsatisfactory	C-
Home Economics			
Industrial Arts			

Intelligence Test Scores:	3rd Grade		6th Grade		8th Grade	
	*lopr	**napr	lopr	napr	lopr	napr
First Quarter						
Second Quarter						✓
Third Quarter					✓	
Fourth Quarter						

*lopr: local percentile **napr: national percentile

STEP scores: (Sequential Tests of Educational Progress) taken in 8th grade

	local percentile band	national percentile band
Reading	33-54	73-88
Mathematics	61-82	89-97

STEP scores see the appropriate sections of the decision-making booklet.

SELF-SCORING SHEET

Name: Frank

Date: March, 1967

	Comparison with Others	Self Ranking
Interests:		
Outdoor	1.....25.....50.....75....[✓ 99]	3
Mechanical	1.....25.....50....[✓ 75]....99	
Computational	1....[✓ 25]....50.....75.....99	
Scientific	1.....25.....50.....75....[✓ 99]	1
Persuasive	1.....25.....50....[✓ 75]....99	
Artistic	[✓ 1]....25.....50.....75.....99	
Literary	[✓ 1]....25.....50.....75.....99	
Musical	1.....25.....50.....75....[✓ 99]	2
Social Service	1.....25....[✓ 50]....75.....99	
Clerical	[✓ 1]....25.....50.....75.....99	
Values:		
Theoretical	1.....25....[✓ 50]....75.....99	
Economic	1.....25.....50....[✓ 75]....99	3
Aesthetic	1.....25.....50.....75....[✓ 99]	2
Social	1.....25.....50.....75....[✓ 99]	1
Political	1....[✓ 25]....50.....75.....99	
Religious (optional)	[✓ 1]....25.....50.....75.....99	
Abilities:		
Verbal Reasoning	1.....25.....50.....75....[✓ 99]	1
Numerical Ability	1.....25.....50.....75....[✓ 99]	2
Spatial Relations	1.....25....[✓ 50]....75.....99	3
Mechanical Reasoning	1.....25....[✓ 50]....75.....99	
Intelligence	1.....25.....50.....75....[✓ 99]	

Jean

Jean has always tried hard to do her work in school but often became discouraged. Her seventh grade marks included 2 F's and 2 D's. She has had reading help over the years. In grade eight, the situation was somewhat better and the year ended with only one failure, in math.

Now in the ninth grade, Jean seems to have "caught on." She is happier, more confident, and her work shows marked improvement. Jean gives much of the credit to her Home Economics teacher who has taken a great interest in this girl. Jean earned a "C" in Home Ec for the first marking period and a "B" for the second marking period. This is the first "B" Jean has ever received. She and her parents are as proud as they can be. In addition, her feelings about herself have become much more positive. She no longer refers to herself as a "dumb bunny" but rather seems to have some self-respect. This in turn is reflected in higher grades in all subjects except science.

Jean is a student who appears to have average ability, and who demonstrates the truth of the saying that "nothing succeeds like success."

What kind of program do you think would be wise for Jean in Grade ten?

INFORMATION SYSTEM FOR VOCATIONAL DECISIONS
Harvard University
220 Alewife Brook Parkway
Cambridge, Massachusetts 02138

SOME PERSONAL FACTS

Name: Jean

Division:

These data were obtained from your official records. You can use these facts to help you in this decision-making unit. If you find any mistakes on this sheet, please let your teacher know.

School Marks:	7th Grade (year average)	8th Grade (year average)	9th Grade (marking periods)	
English	D-	D	D+	C-
Social Studies	F	D	D	C-
Science	F	C	D	D
Mathematics	D	F	D	C (general)
French	(did not take)			
Home Economics			C	B
Industrial Arts				

Intelligence Test Scores:	3rd Grade		6th Grade		8th Grade	
	*lopr	**napr	lopr	napr	lopr	napr
First Quarter						
Second Quarter						
Third Quarter						✓
Fourth Quarter					✓	

*lopr Local percentile **napr: National percentile

STEP Scores: (Sequential Tests of Educational Progress) taken in 8th grade

	local percentile band	national percentile band
Reading	11-25	42-65
Mathematics	5-22	24-55

STEP scores see the appropriate sections of the decision-making booklet.

SELF-RATING SCORING SHEET

Name: Jean

Date: March, 1967

	Comparison with Others	Self Ranking
Interests:		
Outdoor	1.....25.....50....[✓ 75]....99	2
Mechanical	1....[✓ 25]....50.....75.....99	
Computational	1.....25....[✓ 50]....75.....99	
Scientific	[✓ 1]....25.....50.....75.....99	
Persuasive	1....[✓ 25]....50.....75.....99	
Artistic	1.....25.....50....[✓ 75]....99	
Literary	1.....25....[✓ 50]....75.....99	
Musical	1.....25.....50.....75....[✓ 99]	
Social Service	1.....25.....50.....75....[✓ 99]	1
Clerical	1.....25....[✓ 50]....75.....99	3
Values:		
Theoretical	[✓ 1]....25.....50.....75.....99	
Economic	1.....25....[✓ 50]....75.....99	2
Aesthetic	1.....25.....50....[✓ 75]....99	
Social	1.....25.....50.....75....[✓ 99]	1
Political	1....[✓ 25]....50.....75.....99	
Religious (optional)	1.....25....[✓ 50]....75.....99	3
Abilities:		
Verbal Reasoning	1.....25....[✓ 50]....75.....99	1
Numerical Ability	1....[✓ 25]....50.....75.....99	2
Spatial Relations	1....[✓ 25]....50.....75.....99	
Mechanical Reasoning	1....[✓ 25]....50.....75.....99	
Intelligence	1.....25....[✓ 50]....75.....99	

Appendix A

Experience Tables

An experience table shows what happened to other students like you in high school courses and after high school. The attached tables are based on the records of 123 students from Bigelow Junior High School who graduated from Newton High School in 1963.

How to Read an Experience Table

The large numbers in the experience tables stand for ratios: the number 1 stands for 1 out of every 10 students; the number 2 stands for 2 out of every 10 students; the number 3 for every 3 out of 10 students, and so forth.

For practice look at the first experience table. In the left hand column find what you think your ninth grade English average will be. Circle this. Suppose you think your English average at the end of ninth grade will be a "C." Then as you look across this column you can see that 4 out of 10 people (in the sample) with a "C" English average in the ninth grade made a C average in the tenth grade English. Another 4 out of 10 made a D average in tenth grade English and 1 person out of 10 made a B average in tenth grade English.

This is the method used to read all these experience tables. Begin by circling your position in the left hand column. Then read across to see how others like you have done in the past.

What Do Experience Tables Tell You?

When you use an experience table you are using the experiences of other students like you to predict or indicate what might happen to you. To illustrate let us compare weather prediction with experience tables. When the weatherman says that there is a 50% chance of rain for today in the Boston area, how does he know? The weatherman looks at his records of past atmospheric conditions. He sees that in the past it has rained about half of the time when atmospheric conditions are like they are today.

When you use experience tables they also give you a record of the past. You know how students with school marks like yours have done in the past. It is important for you to realize though that there is a big difference between you and the weatherman. The weatherman has no control over the atmospheric conditions. You have some control over your school conditions. This will allow you to determine how different or similar you will be from those students who went before.

Experience tables are indicators and not precise predictors. The information you derive from them will not make your decisions or tell you for sure what will happen to you. After reading an experience table you may want to ask yourself if you want to succeed badly enough to put in the necessary effort to succeed in spite of the prediction.

10th Grade English Marks

9th Grade English Marks	F	D	C	B	A	Total Number
A	0	0	–	9	0	20
B	0	1	6	2	0	49
C	–	4	4	1	–	43
D	0	4	6	0	0	11
F	0	0	0	0	0	0
Total Number	1	28	57	36	1	123

10th Grade Science Marks

9th Grade Science Marks	F	D	C	B	A	Did Not Take Science	Total Number
A	0	0	1	4	5	4	26
B	0	—	4	5	—	0	43
C	—	2	5	2	—	0	42
D	0	1	6	3	0	3	11
F	0	10	0	0	0	0	1
Total Number	1	13	46	41	15	7	123

10th Grade Mathematics Marks

9th Grade Mathematics Marks	F	D	C	B	A	Did Not Take	Total Number
A	0	—	2	5	3	0	19
B	0	1	5	3	1	1	35
C	—	4	4	1	—	5	44
D	1	2	4	3	0	3	22
F	0	3	3	3	0	0	3
Total Number	3	25	45	28	13	9	123

10th Grade Language Marks

9th Grade Language Marks	F	D	C	B	A	Did Not Take	Total Number
A	0	0	1	3	6	0	23
B	0	1	3	4	2	0	29
C	0	3	4	3	—	1	28
D	1	2	3	3	1	4	27
F	0	0	0	0	10	1	2
Did Not Take	0	0	10	0	0	13	14
Total Number	24	35	29	14	2	19	123

10th Grade Social Studies Marks

9th Grade Social Studies Marks	F	D	C	B	A	Did Not Take	Total Number
A	0	0	1	6	3	7	21
B	0	—	3	6	1	13	50
C	0	3	5	2	—	3	34
D	0	4	4	2	0	2	18
F	0	0	0	0	0	0	0
Total Number	0	14	36	38	9	25	123

10th Grade Average

9th Grade Average	F	D	C	B	A	Total Number
A	0	0	0	5	5	17
B	0	—	5	5	0	43
C	0	2	6	2	0	48
D	0	4	4	2	0	15
F	0	0	0	0	0	0
Total Number	0	15	57	42	9	123

High School Average

9th Grade Average	F	D	C	B	A	Total Number
A	0	0	3	7	0	17
B	0	1	8	1	0	43
C	—	6	4	0	0	48
D	1	7	1	0	0	15
F	0	0	0	0	0	0
Total Number	3	46	59	15	0	123

Further Education

9th Grade Average	4 year College	2 year College	Other	None	Total Number
A	9	0	1	0	17
B	7	–	3	0	43
C	2	2	6	0	48
D	1	1	7	0	15
F	0	0	0	0	0
Total Number	57	13	53	0	123

Appendix B: Excerpts from Bulletin No. 13

Each year Newton High School prepares a "Bulletin No. 13" which gives a description of the courses available to all students. This bulletin is normally available only to teachers who share it with students on an individual basis.

For the purposes of this program we felt it was important for each student to have his own copy of the relevant portions of the bulletin. Hence we prepared the material appearing here as Appendix B: Excerpts from Bulletin 13," which contains only those descriptions of the courses open to sophomores at Newton High School.

Excerpts from
Bulletin No. 13

February, 1967

Newton
High School

REGISTRATION - ELECTIVE COURSES

ART DEPARTMENT

Course Code	Course and Description		Credits Per Term
802	Art Major	1st year	4 periods a week--2.50 credits
	A basic art course for the student who intends to continue the subject in art school or college. The course consists of problem-solving through exploration and experimentation in the visual areas of line, form, color, space, texture, and structure, thus developing greater art understanding.		
803	Second half of 802		4 periods a week--2.50 credits
808	Art Minor	1st year	2 periods a week--.50 credit
	This course provides for basic understandings in line, form, color, texture and design. Students whose schedules leave little time for electives will find enrichment in this course.		
809	Second half of 808		2 periods a week--.50 credit
812	Ceramics	1st year	2 periods a week--.50 credit
813	Ceramics	Second half of 812	2 periods a week--.50 credit
814	Ceramics Prerequisite 812, 813	2nd year	2 periods a week--.50 credit
815	Ceramics	Second half of 814	2 periods a week--.50 credit
	These courses offer an opportunity for exploration and individual experimentation in clay. Techniques in hand-building and wheel-throwing will be used. Sculpture, pottery, glazing and firing are included. Pupils of any class may enroll.		
816	Studio		2 periods a week--.50 credit
	This is a course for students, by Art Department invitation only, to work on special assignments. It provides experiences in art media within production and time limitations. Requests providing for a variety of experiences will be accepted by the faculty member teaching this course.		
817	Second half of 816		2 periods a week--.50 credit
818	Art Crafts	1st year--(for pupils in Curriculums I & II)	
819	Art Crafts	Second half of 818	
	These courses offer experience in three-dimensional design as it applies to craft problems. Original creative designs		

will be emphasized. A variety of techniques will be explored related to such media as metal, glass, paper and wood.

872 Illustration (Spring term only) 4 periods a week--2.50 credits

This is a study of Illustration from the Renaissance to the present time. The lives of illustrators and the media used will be considered, as well as the literary sources of the illustrations.

864 General Humanities (Fall term only) 4 periods a week--2.50 credits

In our present-day quest for security and social stability there is a revival of interest in the study of the humanities, the subjects traditionally concerned with human purposes and human values. In this course, aimed at greater appreciation of life today, art, music, drama, the dance, literature, religion and philosophical history are presented as an interrelated unit, showing the influence of each upon the other during certain periods of history.

BUSINESS DEPARTMENT

710 Personal Typewriting (first term) 2 periods a week--.50 credit

This course is specially tailored to the needs of the college-bound student. It aims to develop basic typing skill as well as to give the student training in how to use this skill not only in those special applications normally required of college students but also in the social and business communications of value to an individual in everyday life. Correct techniques are emphasized from the start so that skill acquired may serve as a basis for further vocational training in typing. However, although the industrious student may acquire a skill sufficient for part-time employment, this course is not to be used as a substitute for Typewriting 720, 721 and may not be elected as such by students majoring in business.

During the first term, the objective is primarily the mastery of basic skill with correct techniques on which future skills may be developed. Simple, fundamental applications of typing skill also are introduced during this first term.

711 Personal Typewriting (second term) 2 periods a week--.50 credit
Prerequisite: Personal Typewriting (710)

During this term, in addition to further developing basic skill, the student is given training in the applications of it which he will use in college and everyday life.

712 Personal-use Shorthand (first term) 2 periods a week--1.25 credits

The chief objective of this course is to give the college-bound student a mastery of the most effective techniques of note taking, using a quick, easy-to-use writing system--an adaptation of Gregg Shorthand especially designed for the note taking needs of the college-bound student. The course should be taken for both terms if usable skill is to be acquired. Although the primary purpose of this course is for college note taking, it can serve as a basis for future vocational skill. However, because of the difference in primary objective, students majoring in business may not take this course in the place of Shorthand 724, 725.

During the first term, the student learns the alphabet and word-building principles of personal-use shorthand and makes a start in the application of this skill in taking notes.

720 Typewriting (first year) 4 periods a week--1.25 credits

This course is intended primarily for students interested in a business career; however, it may be elected by non-business students in place of Personal-Use Typewriting. Term 1 covers mastery of the keyboard, typewriting techniques, application of skills, including introduction of numbers and special characters, simple typing problems and drives for speed and accuracy.

721 Typewriting (second half of 720) 4 periods a week--1.25 credits
Prerequisite: Typewriting (720)

This course is a continuation of the first term with stress on business letters, production typewriting, centering problems and tabulations. Envelopes, enclosures, column headings, second sheets, carbon copies and erasing are introduced. Intensive drives for speed and accuracy are emphasized with particular stress on proofreading and correction of errors.

742 Business Mathematics (first term) 4 periods a week--2.50 credits

This is a required course for all business majors in the tenth grade and an elective course for others. The four basic mathematical processes are given a thorough review. Review of fractions and improvement of the skills in using percentages is also covered. Preparing payrolls and other business forms allows us opportunities to apply the skills which we have reviewed.

743 Business Mathematics (second term) 4 periods a week--2.50 credits
Prerequisite: Business Mathematics 742

The second term in business mathematics will emphasize the application of mathematics to everyday business problems by working with trade and cash discounts, mark-up and markdowns, interest, installment buying, stocks and bonds, insurance, property and income taxes, and other business situations. Business vocabulary and information are also stressed as background for future study in related business subjects.

730 Basic Business III X 4 periods a week--2.50 credits (1st year)

This course is open only to Curriculum III students. Emphasis will be placed on a thorough review of the basic fundamentals of arithmetic. The organizing of reports will also be studied.

731 Basic Business III X 4 periods a week--2.50 credits
Prerequisite: Basic Business III X 730 (second half of 730)

The second term will stress the application of arithmetic fundamentals by working with business problems, such as: checkbooks, bank reconciliations, payrolls, and other personal and clerical subjects.

736 Basic Typewriting (first term) 4 periods a week--1.25 credits

This course is open only to Curriculum III students. During the first term, the alphabetic and numerical keyboard is presented. Special characters are introduced. Speed and accuracy are stressed through drills and timed writings.

737 Basic Typewriting (second term) 4 periods a week--1.25 credits
Prerequisite: Basic Typewriting 736

This course is open only to Curriculum III students. A thorough review of the keyboard is presented, with emphasis on numbers and special characters. Further speed is developed. Accuracy is stressed. When this is completed, practical personal and business applications are studied.

DRIVER EDUCATION

908 Driver Education 2 periods a week (fall or spring term) --1.00 credit

Never was it more essential for drivers to be skillful and safe operators of motor vehicles. Consequently, emphasis is placed on knowledge of traffic and safety rules, sound driving practices, and simple preventive maintenance. Dual control cars are used to develop necessary skills and to help teach students the fundamentals of car operation. A sound understanding of traffic regulations and the need to obey them are stressed in this course.

Driver Education is offered to all students at Newton High School. Students may take the classroom instruction during the first or the second term. "Behind the Wheel" instruction is voluntary and the student may be assigned to this phase of Driver Education when he becomes sixteen years of age. Effective January 1, 1964, all students must purchase a learner's permit before starting the "Behind the Wheel" phase.

Note: If you have a specific reason for wishing to take Driver Education the first half instead of second half, please state the reason on your registration blank.

DEPARTMENT OF ENGLISH

CURRICULUM I (and IA)

Pupils who take Curriculum I English plan to attend a four-year college in which the English composition and literature requirement is a liberal arts course.

Course IA 4 periods a week--2.50 credits

101 1st year
102 Second half of 101

Course IA, an advanced college preparatory program for pupils whose ability in English is outstanding, prepares pupils to compare and evaluate literary works: their structure, theme, artistic temper and period, style, and vision of life. It prepares pupils to write and speak fluently in a style of their own. Pupils are invited into the program through counselor and teacher recommendations.

Course I 4 periods a week--2.50 credits

111 1st year
112 Second half of III

Course I prepares pupils to read a work of literature accurately, imaginatively, and perceptively and to take a critical approach to the form and content of a literary work. It prepares pupils to organize and express ideas accurately, thoroughly, and effectively. Students earning a D for the year cannot go on in Curriculum I without (1) teacher approval or (2) make-up in summer school.

CURRICULUM II (and IIB)

Most pupils who take Curriculum II English plan to attend either a four-year college, a junior college, or a school for specialized training in such fields as nursing, or business.

For a small number, high school is the end of formal education. This wide range of purpose among pupils in Curriculum II English is paralleled by a range of aptitude. Therefore, the Curriculum II English program has two courses of study.

Course II 4 periods a week--2.50 credits

121 1st year
122 Second half of 121

Course II prepares pupils to read a work of literature accurately, imaginatively, and with some degree of perception. It prepares pupils to organize and express ideas accurately and concretely.

Course IIB 4 periods a week--2.50 credits

161 1st year
162 Second half of 161

The sequence of 161, 162, 163, 164, 165, and 166 asks students to consider questions of how man expresses himself, communicates with other men, adjusts to nature, creates societies; what his intellectual and artistic and technical and moral capabilities are, what resolutions he makes to the problems that the world and his own nature create. It is a course of study in the reading of literature and in discussion and writing on themes that correlate the study of English with the study of History. Each class that takes this sequence also takes the 461, 462, 463, 464, 465, 466 sequence in History. The History and English teachers work together to make the study of English and the study of History related studies of the ways man expresses himself verbally and the ways he expresses himself politically, culturally, and socially.

CURRICULUM III (IIIS and IIIT)

Pupils who take Curriculum III English plan to go to work immediately after graduation from high school. Their work requires them to use their training in reading, writing, and speaking in general ways, for practical purposes.

Course III 4 periods a week--2.50 credits

131 1st year
132 Second half of 131

The primary purpose of Curriculum III English is to offer pupils practice in attentive and imaginative reading of literature and in clear organization and expression of information. A parallel purpose of the course is to develop basic reading, writing, and speaking skills.

Course IIIT 4 periods a week--2.50 credits

Course IIIT is organized around a special reading and writing program which will enable the pupil to confront the many uses of language in everyday life.

154 Journalism 1st year 2 periods a week--1.25 credits

Open to sophomores and juniors and seniors who have received Department approval. Journalism 1st year requires written work (consisting mostly of stories for The Newtonite) at least as heavy as that of a regular English course, but outside reading and testbook assignments that are lighter than normal course work. The course includes reporting and newswriting, headlines and page make-up, photography and engraving, principles of letter press and other types of printing, copyreading and proofreading. Passed with distinction, Journalism 1st year is the prerequisite to Journalism 2nd year and Newtonite staff positions.

155 Second half of 154 2 periods a week--1.25 credits

FOREIGN LANGUAGE DEPARTMENT

There are three tracks of French: I-a, I and II
Spanish and Latin are offered on two tracks: I and II
German and Russian are offered on one track: I

I-a is offered in Grades X and XI, is called Honors, and prepares for I-4a, Advanced Placement.

I is called Curriculum I, prepares for the CEEB Achievement Test.

II is called Curriculum II, does not prepare for the CEED Achievement Test.

I-a is a rigorous program. Students are selected by the teachers of French in the junior high schools and are recommended to the principal of the senior high school for approval. Only the most capable students are recommended.

Curriculum I, (French, Spanish, German, Russian, Latin) prepares for the CEEB Achievement Test. Three years of senior high Curriculum I are necessary to assure success in the CEEB Achievement Tests for the average student. To be promoted to Curriculum I from the junior high schools, a student must have an average of A, B, or C at the end of Grade 9. Otherwise, such a student must register for Curriculum II. The same is true of a student in Grade 10 or 11 who receives a yearly average of D. Such a deficiency (D) may be made up through summer school. C or better at the end of summer school authorizes registration for the next level of Curriculum I. But no promotion may be granted on the mere promise of registration for summer school work. Under certain conditions (subject to the approval of the department head) tutoring or summer school in other schools besides NHS may compensate for the D deficiency, other than work in the Newton Summer School.

Promotion: Pupils are usually promoted along the same track: I-1, I-2, I-3, I-4; II-1, II-2, II-3. They cannot change from one track to another (up or down) without the department head's permission. Students may not move into or out of I-a without written request and authorization from the department head.

Curriculum II is offered in French, Spanish and Latin. It does not prepare for the CEEB Achievement Test. Any student who does not maintain an average of A, B, in Curriculum I must transfer to Curriculum II, unless the D deficiency is made up in summer school. This is the curriculum for students coming out of modified French in junior high school, as well as the normal track for junior high school students leaving grade 9 with an average of D, unless work is made up in summer school, but no provisional registration for summer school is acceptable for promotion to Curriculum I.

LISTENING COMPREHENSION TESTS: Any student taking the CEEB Achievement Tests in senior high school must take the Listening Comprehension Tests of the CEEB during the same year, generally administered the first Tuesday in February.

They are required of all students in Modern Foreign Language, and under no circumstance are optional. However, no provision for make-up is made in the event of absence from school on that day.

LANGUAGE LABORATORY: obligatory for all students in I-a and I. Students in those Curricula must plan to attend lab twice weekly in Language 1, 2, 3 (except Latin) and once weekly in Language 4. There is no language lab in French 5. Students registering for those courses must therefore plan their programs to allow for this scheduling. No exceptions can or will be made. In Curriculum II lab may be elected by students through a private arrangement with their teachers.

Summer School: Its remedial courses are particularly beneficial to pupils of ability of foreign languages who had the misfortune of being out of school during the regular school year. The results obtained from summer school language classes in the case of youngsters who attend school faithfully the entire school year, and who work diligently at their assigned tasks from September through June, and who end up with a D or F average are of short duration--one term at best.

FRENCH 5: open to Curriculum I or I-a students. Students who have completed I-4 in grade 11, or I-3a in grade 10 go into French 5. In fact, honors students may not take I-4a until grade 12.

201	French Ia	1st year	4 times a week--2.50 credits
202	Second half of 201		4 times a week--2.50 credits
211	French I	1st year	4 times a week--2.50 credits
212	Second half of 211		4 times a week--2.50 credits
213	French I	2nd year	4 times a week--2.50 credits
214	Second half of 213		4 times a week--2.50 credits
221	French II	1st year	4 times a week--2.50 credits
222	Second half of 221		4 times a week--2.50 credits
223	French II	2nd year	4 times a week--2.50 credits
224	Second half of 223		4 times a week--2.50 credits
311	Latin I	1st year	4 times a week--2.50 credits
312	Second half of 311		4 times a week--2.50 credits

This course includes all the work in vocabulary, grammar, and syntax usually regarded as prerequisite for the reading of a Latin author. The constant drill necessary to the mastery of a language is not neglected. Vocabulary and syntax, however, assume their rightful role as tools for understanding and emphasis is placed on the importance of learning vocabulary in context.

313	Latin I	2nd year	4 times a week--2.50 credits
314	Second half of 313		4 times a week--2.50 credits

A course designed to complete the requirements for two college units. Simplified selections from Livy and Pliny and reading from Caesar's Gallic War. Work in Latin composition.

321	Latin II	1st year	4 times a week--2.50 credits
322	Second half of 321		4 times a week--2.50 credits

A course for beginners which combines a simple and easy introduction to the Latin language with the study of Roman life and culture and English work study.

323 Latin II 2nd year 4 times a week--2.50 credits

324 Second half of 323 4 times a week--2.50 credits

A continuation of the preceding course. Preliminary linguistic work necessary for the reading of a classic author is completed and Caesar is begun. More study of Roman life and institutions and work study in English. Original reports and book reports.

351 Spanish I 1st year 4 times a week--2.50 credits

352 Second half of 351 4 times a week--2.50 credits

341 Spanish II 1st year 4 times a week--2.50 credits

342 Second half of 341 4 times a week--2.50 credits

251 Russian I 1st year 4 times a week--2.50 credits

252 Second half of 251 4 times a week--2.50 credits

271 German 1st year 4 times a week--2.50 credits

272 Second half of 271 4 times a week--2.50 credits

HOME ECONOMICS DEPARTMENT

820 Home Economics I 4 periods a week--2.50 credits
Grades 10, 11, 12

Offered for those students who have had no experience in home economics since junior high school. This course offers the students an opportunity to build and expand upon the basic skills of food preparation, with emphasis on the planning, preparation, and serving of attractive and nutritionally balanced meals. In the area of clothing, emphasis is placed on the building and expansion of skills in clothing construction. The principles of line, design, and color are studied in their relationship to clothing.

821 Second half of 820 4 periods a week--2.50 credits
Grades 10, 11, 12

824 Home Economics II 2 periods a week--1.25 credits
Curriculum I only Grades 10, 11, 12

This course is for the Curriculum I girl who may not have time in her program to take home economics four times a week, but wishes to have some experience in this area. Individuality and distinctiveness in the home are discussed; time is spent in the development of an interest or talent in clothing construction. The student is given a basic knowledge of food preparation so that she may plan, prepare, and serve attractive nutritionally balanced meals.

825 Second half of 824 — 2 periods a week--1.25 credits
Curriculum I only — Grades 10, 11, 12

843 Family Living 1st year — 4 periods a week--2.50 credits
Curriculum III — Grade 10

Family Living courses have been designed for these students who have been placed in the special course by their guidance counselor. The course closely parallels that of Home Economics I, but is conducted at a slower pace with a smaller number of students receiving individualized attention.

844 Second half of 843 — 4 periods a week--2.50 credits
Curriculum III — Grade 10

860 Foods (summer term) — 2.50 credits Grades 10, 11, 12
Students must arrange their schedule so that they are free after 1:00 p.m. — Interested students are selected by guidance counselors and subject teachers

This course is designed to interest those students who may have a vocational interest in a career in foods. In the past the students in this program have been responsible for feeding the Harvard-Newton Summer School at Weeks Junior High during the summer.

Child Care — 2.50 credits Grades 10, 11, 12
861 (fall term) — Interested students are selected by guidance counselors and subject teachers
862 (spring term)
863 (summer term)
Students must arrange their schedule so that they are free after 1:00 p.m.

A course which hopes to interest those students interested in working with children as a career, but who may not be planning on going to college after high school. Students work in the elementary schools in Newton as teacher aids. A great variety of field trips and guest lecturers are invited to the workshops which are part of the training program.

INDUSTRIAL ARTS DEPARTMENT

865 Industrial Crafts I — 4 periods a week--1.25 credits

An opportunity is provided for students interested in wood or metal-working to make decorative and useful articles. With instructor's guidance, pupils are permitted to select their own projects. The activities included: sketching, hand and machine woodworking, and welding.

866 Industrial Crafts II 4 periods a week--1.25 credits
Second half of 865

Open only to pupils who have passed Industrial Crafts 865. This course covers plastics and metal forming such as chasing and embossing.

869 Technical Drawing I 2 periods a week--1.25 credits

For the beginning student in drawing, this course will introduce the pupil to the equipment used by a draftsman and help him to develop basic skills in the use of those tools. The emphasis will be on quality, requiring neat printing, good line technique, and accuracy of measurement. The course will carry the pupil through elementary multiview drawing. Pupils who had the usual junior high drawing program should elect this course.

880 Technical Drawing II 2 periods a week--1.25 credits
Second half of 869

Technical Drawing 880 continues the work started in Technical Drawing 869 with further work in multiview drawing, dimensioning, and auxiliary views. The term ends with the making of the details and assembly drawings of a machine part. A junior high school pupil who has elected enough drawing to equal the course content of drawing 869 may elect this course with the instructor's permission.

885 Technical Drawing I & II 4 periods a week--2.50 credits

An accelerated program which includes the material covered in 1 & 2.

881 Technical Drawing III 2 periods a week--1.25 credits

Only pupils who have successfully completed Drawing 2 may elect this course. The course covers advanced work in multiview drawing, pictorial representation, (isometric, oblique, perspective), developments, and an introduction to descriptive geometry.

890 Fundamentals of Engineering I 4 periods a week--2.50 credits

A Fundamentals of Engineering sequence is a laboratory study of machines and principles, operations and applications. Experiments, testing, and designing are emphasized in lieu of project construction.

Fundamentals of Engineering I begins with a survey of technical principles as the student designs a project or experiment to be carried out in the machine shop. The course emphasizes machine shop theory, plastics structure, and welding techniques.

891 Fundamentals of Engineering II 4 periods a week--2.50 credits
Second half of 890

Open only to pupils who have completed Fundamentals of Engineering I. This course centers around power and its sources. Student's work includes electricity and the internal combustion engine.

896 Electronics 4 periods a week--2.50 credits

This course will be a laboratory study of the principles of electronics theory and the construction of electronic devices. The activities will be centered around principles of radio, amplification, test equipment, circuit designing, repair of simple devices and experimentation.

897 Second half of 896 4 periods a week--2.50 credits

898 Pre-Industrial Training I 4 periods a week--2.50 credits

This course is for pupils who are preparing to enter industry. Emphasis is given to organizing, planning, and fabricating projects in woodworking and metal crafts. Mass production runs will be stressed as well as work on individual projects.

899 Pre-Industrial Training II 4 periods a week--2.50 credits
Second half of 898

Open only to pupils who have passed Pre-Industrial Training I. This course stresses job skills and work habits on the wood and metal working machines.

MUSIC DEPARTMENT

Those who plan to major in music should consult with one of the music teachers in order to select the right variety of courses suitable for college entrance.

850 Music Appreciation 4 periods a week--2.50 credits

A cultural course requiring no previous knowledge of music. It acquaints the student with the significant works of great composers, past and present, jazz included. Listening to and discussing and evaluating the music studied in class stimulates the imagination of the student, thereby helping him to develop a discriminating and intelligent ear. Observing and criticizing TV concerts exposes the student to the best of music.

851	Second half of 850	4 periods a week--2.50 credits
852	Music Theory 1st year	4 periods a week--2.50 credits
853	Second half of 852	4 periods a week--2.50 credits

Sequential courses aimed toward the composing and orchestrating of music. Theory 852, 853 deals with the major and minor scales, ear training, and use of the elementary chords in the harmonization and creation of melodies. Theory 854, 855 deals with advanced chords, ear training and other elements which afford the student greater facility with which to create and harmonize more imaginatively.

856	General Humanities	4 periods a week--2.50 credits (fall or spring term)

This course explores the inter-relationship of the subjects concerned with human purposes and human values, i.e., Art, Music, Drama, Dance, Literature, Religion and Philosophical History. Knowing the influence of each upon the other in various periods in time gives greater appreciation of life as it is today.

830	A Cappella Choir	4 periods a week—1.25 credits
831	Second half of 830	4 periods a week--1.25 credits
832	A Cappella Choir	2 periods a week--.50 credit
833	Second half of 832	2 periods a week--.50 credit

Ninth grade, sophomore, and junior boys and girls are selected by try-out in the spring for these groups. Training in good choral tone, diction, intonation, and interpretation is given. The finest choral music of all types is studied and sung. There are many opportunities for these groups to perform. The number of times per week that you take A Cappella Choir depends on your scheduling time and the teacher's recommendation at the try-out.

834	Voice Training	2 periods a week--1.25 credits

This course is concerned with giving the interested singer a knowledge of the proper use of his singing voice through the development of breathing, voice placement, diction, tone color, and resonance. Since the emphasis in this class is the performance of the individual, each student is given ample opportunity to sing alone, as well as with the entire group. Approval by Miss Seaver is necessary before registration. This course is a prerequisite to #830, #831.

835	Second half of 834	2 periods a week--1.25 credits
836	Girls Chorus	2 periods a week-- .50 credit

This chorus offers semi-classical and classical music arranged for girls voices alone. A love of singing and ability to carry a tune are the requirements for admission. This group prepares and performs programs throughout the year.

837	Second half of 836	2 periods a week-- .50 credit
857	Music for living	4 periods a week--2.50 credits fall or spring term

This course is designed to acquaint the student with the many areas in his life in which music plays a significant and vital part. The course, cultural in its purpose, does not require a technical understanding of music.

858	Instrumental Performance	4 periods a week--2.50 credits
859	Second half of 858	4 periods a week--2.50 credits
873	Instrumental Performance	4 periods a week--1.25 credits
874	Second half of 873	4 periods a week--1.25 credits

This course is the modern replacement of the older courses labeled "Band" and "Orchestra." It will package many kinds of instrumental and performing groups under one heading and will offer four rehearsals per week on a regular block. Content of the course will include such things as string ensembles, wind ensembles, concert orchestra, and concert band. Each student will be able to work effectively at his own level of ability under one or more instructors. Requirements include participating in all performances during school time or in the evening. Approval needed by either Mr. March or Mr. Cobb for either option.

MATHEMATICS DEPARTMENT

In order to have a mathematics course available for each student in Newton High School, we have developed sequences of courses that vary greatly in their content and degree of difficulty. There are five tracks, four college preparatory and one non-college preparatory. The names of the tracks in decreasing order of difficulty are:

Honors Track	501 Math Ia-1

UICSM TRACK	UIMATH I-1
Regular I Track	Math I-1
Regular II Track	Math II-1
Non-college Preparatory Track	Basic Math I

The first three tracks, Honors, UICSM, and Regular I are top competitive college preparatory tracks. The UICSM (University of Illinois Committee on School Mathematics) and the SMSG (School Mathematics Study Group) materials are used in these three tracks. Also, we use some of the new commercial textbooks that follow some of the ideas developed by the UICSM, SMSG, and the Commission on Mathematics of the College Entrance Examination Board. Students must be invited to join the Honors Track. Only those students that have taken the UICSM program in Junior High may elect the UICSM Track.

The fourth track, Regular II, is a less competitive college preparatory track, and is a "modern mathematics" program using many of the new commercial textbooks that have been influenced by the UICSM, SMSG, Commission on Mathematics, and other experimental groups. In this track the pace is slower, and some topics are not dealt with at the same depth as in the top three tracks. It is for those students that need a good solid college preparatory program, but need a slower pace. They need more time to learn the concepts and more drill and practice to make the concepts stick.

The fifth track, Non-college Preparatory, is for those students that have not developed their mathematical background to the point where they can take and succeed in the college preparatory program. In this track we are using materials that have been written recently and have many of the new topics and new approaches to the old topics that are found in the books for the college preparatory tracks. The courses in this track cover three areas; arithmetic, geometry, and algebra with social applications. We feel that these students should have the new approaches to arithmetic, geometry, and algebra, but geared to their level of development. All of our students are exposed to the "new" mathematics, hopefully, at their level of development.

All students capable of taking a college preparatory sequence of courses in mathematics should do so whether they plan to go to college or not. All students should seek to enter and stay in the strongest track in which they can succeed with a mark of C or better.

Honors Track IBM numbers 501, 502, 503, 504, 505, 506

501 Math Ia-1 4 periods a week--2.50 credits

Prerequisites: Students must be well above average in native ability, be highly motivated in mathematics, and be recommended by their junior high algebra teachers. They must have the ability and inclination to do independent work. These students will come from the UICSM and other accelerated classes in the junior high schools. Pupils are assigned to this course by invitation only.

Content: The first half of plane and solid geometry, an introduction to coordinate geometry and the first half of intermediate algebra.
Texts: Anderson, Garon, Gremillion--GEOMETRY or Moise and Downs--GEOMETRY. Fehr, Carnahan, and Beberman--ALGEBRA with TRIGONOMETRY, Second Course
Guidance Suggestions: Students that successfully complete this course with A, B, or C marks and are recommended by their teachers should continue with 502 Math Ia-2. Very few students with C marks will be recommended to continue the sequence. Students that are not recommended to continue in the sequence should take 552 Math I-2.

502 Math Ia-2 4 periods a week--2.50 credits

Prerequisites: Successful completion of 501 Math Ia-1 with A, B, or C mark and recommendation of teacher.
Content: The last half of plane and solid geometry, an introduction to coordinate geometry and the last half of intermediate algebra.
Texts: Same as for 501 Math Ia-1
Guidance Suggestions: Students that successfully complete this course with A, B, or C marks and are recommended by their teacher should continue with 503, Math Ia-3. Very few students with C marks will be recommended to continue this sequence. Students that are not recommended to continue in the sequence should take 554 Math I-4 or if this is too strong take 553 Math I-3.

511 UIMATH I-1 4 periods a week--2.50 credits

Prerequisites: Completion of UICSM Units 4 and 5 or the UICSM Course 1 in junior high with A or B marks and recommended by the teacher. A very few students with strong C marks may be recommended by their teachers. Junior High School students in 9th grade UICSM with marks of C should enter 551 Math I-1. If their marks are D or F the students should go to Summer School and repeat elementary algebra (not the UICSM sequence). If they successfully raise their elementary algebra mark to a strong C or better they should enter 551 Math I-1. If their mark is an average C or D, they should enter 521 Math II-1.
Content: First half of the UICSM Geometry Course.
Text: Beberman and Vaughan, HIGH SCHOOL MATHEMATICS Course 2.
Guidance Suggestions: Students with marks of A, B, or C and recommended by the teacher should take 512 UIMATH I-2. Many students with C marks should take 552 Math I-2. Students with

D marks may take 552 Math I-2, but 522 Math II-2 might be more appropriate.

512 UIMATH I-2 4 periods a week--2.50 credits

Prerequisites: Completion of 511 UIMATH I-1 with marks of A, B, or C and recommended by the teacher.
Content: Second half of the UICSM Geometry Course, and as much of Course 3 as time will permit.
Texts: Beberman and Vaughan--HIGH SCHOOL MATHEMATICS Course 2 and Course 3.
Guidance Suggestions: Students with marks of A, B, or C and recommended by the teacher should take 513 UIMATH I-3. Many students with C marks should take 553 Math I-3. Students with D marks may take 553 Math I-3, but 523 Math II-3 might be more appropriate.

551 Math I-1 4 periods a week--2.50 credits

Prerequisites: Completion of an elementary algebra course of a modern type that includes solutions of the quadratic equation by factoring, completing the square, and the quadratic formula with a mark of C or better and the recommendation of the teacher and guidance counselor.
Content: This is the first course of a sequence of four (4) integrated courses that completes geometry, and intermediate mathematics. It is approximately the first quarter of a geometry course and the first quarter of an intermediate mathematics course.
Texts: One geometry book and one algebra book selected from the following:
Moise and Downs--GEOMETRY
Anderson, Garon, Gremillion--GEOMETRY
SMSG--Intermediate Mathematics
Pearson, Allen--MODERN ALGEBRA WITH TRIGONOMETRY
Fehr, Carnahan, and Beberman--ALGEBRA WITH TRIGONOMETRY--Second Course
Lendsay, Slesnick, and Johnson--ALGEBRA--Second Course
Banks and Sobol--ALGEBRA TWO
Weeks and Adkins--ALGEBRA COURSE TWO
Guidance Suggestions: Students with marks of A, B, or C and recommended by the teacher will continue with 552 Math I-2. Students with a mark of D may repeat 551 for no credit or get special permission from the Head of the Math Department to continue in 552, or take 522. Students with mark of F must repeat 551 or take 521.

552 Math I-2 4 periods a week--2.50 credits

Prerequisites: Completion of Math I-1 with marks of A, B, or C.
Content: This is the second course of the sequence of four (4)

integrated courses and it covers approximately the second quarter of the geometry and the second quarter of the intermediate math course.
Text: Same as 551
Guidance Suggestions: Students with marks of A, B, or C and recommended by the teacher will continue with 553. Students with mark of D may repeat 552 for no credit, or get special permission from the Head of the Math Department to continue in 553, or take 522. Students with mark of F must repeat 552 or take 522 (very weak students should consider 521 instead of 522).

521 Math II-1 4 periods a week--2.50 credits

Prerequisite: Completion of a 9th grade elementary algebra course through quadratic equations with a mark of C or better, or completion of 528. Students with D in elementary algebra in grade 9 should take 528 which is the last half of an elementary algebra course (if the student is very weak he should take 527 and repeat elementary algebra for high school credit). Those students that complete only some of the topics in an elementary algebra course (½ or more) with marks of A, B, or C work should take 528 their first term in grade 10. Students with marks of D in an incomplete elementary algebra course must start with 527 at the high school unless there are circumstances that justify their being placed in 528. Many students in Newton are being pushed too fast through mathematics. A slower pace and at a lower level is now available to the student who has difficulty in mathematics.
Content: First half of a geometry course both plane and solid.
Texts: One of the following:
Price, Peak, Jones--AN INTEGRATED SERIES, BOOK TWO (GEOMETRY)
Smith and Ulrich--GEOMETRY, Revised
Jorgensen, Donnelley, Dolciani--MODERN GEOMETRY
Guidance Suggestions: Students with marks of A, B, C, or D and recommended by their teacher will continue with 522. It is strongly recommended that students with a mark of D repeat 521. Students with a mark of F may repeat 521, but they are strongly urged to take 528 instead to get a better mathematical background and then take 521 the first semester of their junior year.

522 Math II-2 4 periods a week--2.50 credits

Prerequisites: Completion of 521
Content: Second half of a geometry course both plane and solid.
Texts: Same as 521
Guidance Suggestions: Students with marks of A, B, C, or D and recommended by their teacher may take 523. If the student has a mark of D he is strongly urged to take 528 before taking 523. Students with mark of F should repeat the course.

527 Elementary Algebra 1 4 periods a week--2.50 credits

Prerequisites: Completion of pre-algebra or general mathematics course in grade 9 with marks of A, B, or C. Students with marks of D in grade 9 general mathematics should take 563 Basic Math 3, then 564 and start 527 in the first term of the junior year.
Content: The first half of an Elementary Algebra course through quadratics.
Texts: Price, Peak, Jones--MATHEMATICS, AN INTEGRATED SERIES, Book one.
Peters and Schaff--ALGEBRA ONE, A MODERN APPROACH.
Guidance Suggestions: Students with marks of A, B, C, or D and recommended by their teacher should continue with 528. Students with an F may either repeat the course or take 564 Basic Math 4 which is a pre-algebra course. For most students with an F, 564 and then start 527 in the first term of the junior year is the best program.

528 Elementary Algebra 2 4 periods a week--2.50 credits

Prerequisites: Completion of 527 or about ½ of an elementary algebra course in grade 9. This is also a good course for students to start with in grade 10 if they have D or low C marks in an algebra course taken in grade 9. 528 will be offered in the first term as well as the second term.
Content: The second half of an elementary algebra course, through quadratics, continuation of 527.
Texts: Same as 527.
Guidance Suggestions: Students with marks of A, B, or C should take 521. Students with mark of D may take 521 but are advised to repeat 528 for no credit to improve their knowledge of algebra before continuing with 521.

561 Basic Math 1 4 periods a week--2.50 credits

Prerequisites: Admittance to Newton High School but not ready for a pre-algebra course, Basic Math 3, and Basic Math 4. This course is for those students that have had extreme difficulty in mathematics and consequently have very poor marks and low percentile ranks on standardized tests.
Content: Arithmetic, algebra, geometry, social and practical applications of arithmetic.
Texts: Wilcox and Yarnelle--MATHEMATICS, A MODERN APPROACH, Book one.
Peters and Schaaf--MATHEMATICS, A MODERN APPROACH, Book one.
Guidance Suggestions: Students that pass 561 should continue with 562. If a student is making top A and High B grades and is misplaced he might take 564 instead of 562 and be ready for 527 after 564.

562 Basic Math 2 4 periods a week--2.50 credits

Prerequisites: Completion of 561 or its equivalent.
Content: Continuation of work in 561 on arithmetic, algebra, geometry, social and practical applications of mathematics.
Texts: Same as 561.
Guidance Suggestions: Students that complete 562 may continue with 563 except students with A and strong B marks should seriously consider taking 527 and 562. Teachers should urge them to do so.

SCIENCE DEPARTMENT

FIRST YEAR COURSES

These courses are separately designed for the students with all manner of ability and interest. The course descriptions should be very carefully read and thought through by those persons who seek to aid the student in making a wise choice of program; one in which he has considerable chance for success. It is important to recognize that change from one curriculum to another will prove difficult because of basic and unique differences in the several offerings.

The philosophical approach, content, and methodology employed in the separate courses are greatly influenced by recently developed high school science curriculum under the auspices of the National Science Foundation.

Text and materials of study as prepared and recommended by the Biological Science Curriculum Study (Blue, Yellow and Green versions, Special Materials Study, Second Year Biology), Physical Science Study Committee, Chemical Education Materials Study, and Chemical Bond Approach are presently in use.

610 Biology I Molecules to Man 4 periods a week--2.50 credits

This biology course makes several demands on its students: a fairly high reading ability, the ability to apply mathematics as a laboratory tool, the ability to take well organized notes in class and to abstract main ideas from the readings in the text and outside sources and regular self-propelled study. Students with good spatial relations ability and interest in facing questions whose answers are unknown will be at a distinct advantage. There will also be specific vocabulary and facts to be learned.

The student will examine ecological relationships between living things, structure and function at the molecular and cellular levels as well as in multicellular plants and animals, and topics in development, genetics and evolution. The student will spend much of his class time in the laboratory observing living organisms and forming his own interpretations of his observations. He may spend several weeks examining a particular topic in depth in the laboratory.

Topics: (fall term)
1. Classification and Ecology
2. Cytology
3. Reproduction, Growth and Development
4. Genetics

611 Second half of 610 Molecules to Man
4 periods a week--2.50 credits

Topics: (spring term)
1. Variety of Living Things
2. Evolution
3. Living Systems
4. Ecology

620 Biology II Man in a Living World
4 periods a week--2.50 credits

The student entering this program should come armed with basic arithmetic skills, ability to read science literature of appropriate difficulty for this age level, and some background in knowledge of science.

The feeling exists that many of these students will take no more science in school, very few will become research biologists, and only a slightly larger proportion will enter the biological professions. If, as is suspected, this is true, then this biology course should provide the student with a backgound in biology that is as advanced as the fifteen-sixteen year old mind will permit. Subject matter should be selected to increase his effectiveness as a future citizen. This hope exists that the present program is such a course and that it will be of value to the service attendant, the housewife, the physician, the biochemist.

The course is laboratory oriented. Students will be involved with the making of observations, collection of data, graphing and interpretation of data, and prediction from derived understanding. The ecological aspects of biology will be emphasized. This emphasis follows from the thought that understanding of the way in which a biological community functions is of great importance to any citizen. Problems created by increasing human populations, by depletion of resources, by pollution, and the like are ecological problems. The student will very likely leave this program with an increased understanding of his own body so that this aspect of an inquiry into life will not be neglected.

620 Biology II (cont'd)

Topics: (fall term)
1. Introduction to Biology
2. Ecology and Classification
3. Microbiology
4. Reproduction and Development
5. Genetics

621 Second half of 620 Man in a Living World

4 periods a week--2.50 credits

Topics: (spring term)
1. Evolution
2. Higher Organisms--The Morphology and Physiology of Plant and Animal Systems
3. Ecology (Advanced)

660 Biology IIB Biology--An Aspect of Our Culture

4 periods a week--2.50 credits

Students entering this program should have basic arithmetic skills. Students with reading problems will not be greatly hampered in the program and should, in fact, improve their reading skills. Students should have had some experience in learning of science.

Students will gain experience in asking questions of the living world of which they are a part. The expectation is that a sensitive awareness and appreciation of all life will develop. The hope exists that the class may be kept to a relatively small group of students so as to permit some individualized instruction and allow for strong and beneficial group feelings to develop.

The course will try to anticipate the scientific ideas which will be presented in their historical concept as part of the student's experience in the study of English and History. Thus the student will have a perspective from which to view historical development of these ideas. The objectives of the science part of the inter-departmental program are twofold: to develop certain skills and to convey some particular knowledge about the human body. The content objectives of the course are to help the student understand the functioning of the human body and to raise questions about man's relation to his environment, particularly in the twentieth century. In addition to augmenting the student's knowledge of specific information the course aims to improve the student's skills in reading, mathematics, note-taking and in the laboratory.

Topics: (fall term)

1. The Biology of Behavior: How do Different Animals Behave and What is the Biological Basis of their Differences and Similarities?
2. Evolution: How did the Plants, Animals, and People of today Evolve?
3. Form and Function: How is the Form of an Organism Related to the Way it Works? What Goes On Inside Living Things?

661 Second half of 660 Biology--An Aspect of Our Culture
4 periods a week--2.50 credits

Topics: (spring term)

1. Reproduction, Growth and Development: How does an Adult Organism Eventually Grow From a Single Cell?
2. Microbiology: What do Microscopic Organisms Do and How Do They Affect Man for Better or For Worse?
3. Man and His Environment: Where does Man Fit in the Relationships Among All Living Things and What Effect is he Having on These Relationships?
4. A Case Study of Any Particular Scientific Problem: To Be chosen by the teacher and the class.

626 Physical Science I, II An Approach to Specialized Science
4 periods a week--2.50 credits

This is an integrated and somewhat unified approach to the study of science. It is intended for sophomores as a preparatory course for the more specialized science, particularly physics and chemistry. Juniors and seniors should elect this course as a cultural experience in science and perhaps because they are seeking a good terminal experience in science.

As a general rule students with credit in either chemistry or physics may not elect this course. However, a student who performs poorly in chemistry or physics may, having secured the approval of the Science Department Head, enter the program.

A large part of the class work will go on in the laboratory. The development of laboratory skills, application of the algebra, graphing of relationships, model making and interpreting will occur throughout the course. The approach in this study will be generally non-mathematical, but will examine in some detail the most interesting aspects of physics and chemistry.

Topics: (fall term)

1. Graphing as a Tool
2. Physical Behavior of Matter
3. Force and Motion
4. Chemical Behavior of Matter

627 Second half of 626 (spring term) 4 periods a week--2.50 credits

Topics:
1. Geology and Oceanography
2. Current Electricity
3. Electronics
4. Meteorology
5. Light
6. Astronomy

SOCIAL STUDIES DEPARTMENT

410 Introduction to the Western Tradition I
4 periods a week--2.50 credits
(Curriculum I elective--required of other curricula)

In this course the student is not expected to survey the principle events of all ages. He is expected to see how modern civilizations have grown out of past civilizations and to acquire some understanding of major world events and trends now transforming the present age. Students hoping to be considered for Advanced Placement in history should plan to take this course during Grade 10.

411 Second half of 410 4 periods a week--2.50 credits

450 Ancient History I 4 periods a week--2.50 credits

Ancient History begins with the rise of civilization in the Middle East and ends with the period of decline and fall of the Roman Empire. Particular attention is paid to the cultural contributions of the Egyptians, the Jews, the Greeks and the Romans. There is much reading in the supplementary materials, and papers required. Important characteristics of the course and the use of comparison in the study of civilizations and the stress on ideas of history.

451 Second half of 450 4 periods a week--2.50 credits

420 Introduction to Western Tradition II
4 periods a week--2.50 credits

As an introduction to the analysis of public controversy, this course provides a wide variety of case studies encompassing different forms of inter-personal and social conflict. The introduction is followed by a series of studies in the growth of English-American constitutionalism, including analysis of political and legal process as it related to institutional development.

421 Second half of 420 4 periods a week--2.50 credits

461 Introduction to Western Tradition II 4 periods a week--2.50 credits

The course begins with an exploration of the ideas of man as a creature with potential and the implications of this idea. In a study of prehistorical and preclassical ancient civilization the aim is to encourage students to think about what it means to be human. This unit establishes the tone and the direction of the year's work.

An exploration of man as a becoming creature leads to a consideration of man in the context of society. The emphasis shifts from man the maker of tools, language, and math in a physical setting to the individual confronting his social environment. Unit three dwells on social status in feudal Europe and regards the individual within a social group. The student sees more clearly the realities of social status and appreciates more deeply the dignity of the individual in any social group. The fourth unit shifts from the previous concern with social status to the seemingly unbounded humanistic individual of the Renaissance. Studying a few Renaissance men in art, religion, politics, science, and literature reveals to students the breakdown of the old order and the coming of the new Europe. The variety of these men's experience suggests the fulfillment of the creature with potential. Unit five emphasizes one of the chief accomplishments and chief problems of man in the modern world: science and technology. Students are confronted with the problem of how to use what has been created for man's benefit rather than for man's harm. The year culminates with the reading of several novels which explore in depth the main ideas treated earlier.

462 Second half of 461 4 periods a week--2.50 credits

430 World History III 4 periods a week--2. credits

A brief, but comprehensive account is developed in this course of the emergence and evolution of the different civilizations of the world. Much attention is paid to leading figures in history and to the importance of ideas on the lives of men. The influence of culture on the individual lives of men is also an important theme. A textbook is used, and there is considerable reading of newspapers.

431 Second half of 430 4 periods a week--2.50 credits

426 Geography 4 periods a week--2.50 credits

This course deals with the geography of the United States in relation to the rest of the world. The course is occupied with a consideration of world problems in the light of geographic interdependence, the relation of man to the earth upon which he lives, and the effect of climate and environment upon the course of human events. Place geography is taken up in this course, but much stress is placed on the importance of the concept of the region and the circumstances which give it significance. There is considerable reading in supplementary textual materials, and room is made for map-reading and the interpretation of charts, graphs, and tables.

427 Second half of 426 4 periods a week--2.50 credits

(Newton High School-----Technical Vocation Department)

This Curriculum is for the boy who looks for advancement to responsible positions in the industrial field and who plans to start work immediately upon completion of this course. It enables the student to secure an academic education and, at the same time, specialized occupational training with the necessary related technical knowledge. The demand for this type of training far exceeds the supply, and placement in the past has always been very high. Many of the school's graduates have risen to supervisory and administrative positions in industry.

Starting in the fall of 1967 the student taking this curriculum will spend one-half day in shop, except Plant Science, and the remainder of the day with related and academic subjects. Credits granted in all subjects each term. The level of academic subjects will depend upon the pupil's ability and will allow many more students to complete requirements for entrance into post high school training if they decide to continue their education upon graduation instead of going directly into industry.

The school conducts a cooperative program with nearby concerns whereby students are allowed to work in industry one-half of their school time. This privilege is for pupils doing meritorious work in school and who wish to take advantage of cooperative work.

This course grants a high school diploma and a technical certificate. A record of the pupil's achievement and the hours spent on the various phases of the trade are included with the technical certificate.

The course of study is arranged to give the pupil his academic training as well as his practical and technical training.

Instruction is offered in the following trades:

Automobile Mechanics
Sheet Metal
Electricity
Printing
Drafting
Mill Carpentry
Machine Practice
Electronics

The pupils who take the Technical Vocational program might have anyone of three objectives and the courses they elect will vary. They may plan to enter industry in a skilled or semi-skilled job upon completion of High School. They may plan to enter industry as a technician (that area which exists between the tradesman and the engineer) or they may be planning additional technical training after graduation from high school.

Appendix C: "Opportunities in Secondary Education"

Newton High School publishes a yearly booklet which gives information about the high school program to prospective students. In addition to describing the objectives of Newton High School and requirements for graduation, it contains the following information:

a. purpose of each curriculum

b. requirements of each curriculum

c. rule for selecting and changing the curriculum level of a course

d. IBM numbers of all courses

The booklet contains detailed instructions on registration procedures and a space for filling out a program for the students' own use. It does not contain detailed descriptions of each course. These descriptions are found in Bulletin No. 13, which we have included as Appendix B.

Every ninth grade student in Newton normally receives a copy of this "opportunities" booklet.

NEWTON PUBLIC SCHOOLS

OPPORTUNITIES IN SECONDARY EDUCATION

Grades X - XI - XII

1967 - 1968

*

NEWTON HIGH SCHOOL

NEWTON, MASSACHUSETTS

*

PARENTS: Further information regarding course offerings and choices may be obtained from counselors or homeroom teachers. Ninth graders should consult junior high counselors.

Newton Technical High School Press

THE PHILOSOPHY OF NEWTON HIGH SCHOOL

I. *The Framework* — responsibility to the ideals and practice of democracy and its concept of the nature of man.

Our school's roots are in the heritage and tradition of a democratic society that recognizes men as equal before God and the law, but free to be different. We regard education as both a right and a privilege, and we expect the student to so regard it. We have the duty to help each student see his own value, dignity, and responsibility both as an individual and as a member of society. The school finds its role in its belief that human beings have intellects capable of being disciplined for thinking; powers of sense and imagination capable of being stimulated for understanding and creativity; and free will capable of assuming personal and social responsibility. Through dedication to scholarship and belief in diversity of thought and expression, Newton High School defines its particular role.

II. *The Community and The School* — a relationship of reciprocal responsibility.

It is the school's responsibility to reflect the community, but at the same time to provide independent leadership for it because the school has standards and ideals of its own. It must provide the kind of educational background that will enable our youth to become reasonably efficient and productive citizens of a world community whether they continue education at an advanced level after high school, join the armed forces, or enter business, industry, or homemaking. We share our facilities and our experiences with parents, civic and educational organizations, and with college and universities. We feel a responsibility to establish and maintain channels of communication to ensure free exchange of ideas because we believe the school functions best when it is respected and supported by the community.

III. *The Program* — a dynamic and varied entity.

We believe that teachers, counselors, and administrators have a continuing responsibility to provide a varied and ever-evolving program. The school should concern itself with the many phases of student growth and with the wide range of student ability and interest, both in the class and in the extracurricular and athletic program. We recognize that we do not provide for all the needs of all children, but we continually seek out through research and experimentation approaches to the student for whom our program does not sufficiently provide. Our school has the responsibility to provide systematic and organized guidance to help students make the best possible use of their abilities.

IV. *The Staff* — a group of capable, independent, and cooperative individuals.

The teacher, counselor, and administrator try to meet the needs of youth through knowledge of children and how they learn, as well as through the school program. We believe the teacher is a technician and an artist, dedicated to his subject field and to children. We believe he should be free to teach and that teaching is his central role. We expect teachers to relate to children, but in a variety of ways, according to individual temperament. Teachers have a duty to test students, to keep standards high, but to balance standards with concern for the individual. Teachers also have an obligation for the extracurricular activities of the school. They know their responsibilities to the welfare of students, to each other, and to the principles and ideals of public education. We believe each member of the staff should keep in touch with his colleagues, with current developments in education, and with the community. Furthermore, the staff should be specialized, but representative.

V. *The Atmosphere* — freedom for each individual to seek, to fail, to succeed.

We believe that we function best in the climate of responsible freedom. We believe we should be free to express ourselves whether we support the orthodox or propose the radical, but not free to indoctrinate. We believe it is our duty to exercise and encourage this responsible freedom because Newton High School must remain dedicated to free and open inquiry.

Objectives

1. To stimulate the fullest possible mental development of each student.
2. To provide a framework in which the teacher-scholar can function effectively
3. To enable each student to become a healthy, moral, knowledgeable, and stable individual.
4. To instill in our students a knowledge of and a personal commitment to the ideals of democracy.
5. To enable each student to understand and appreciate his own worth and dignity as well as the worth and dignity of his fellows.
6. To provide programs of instruction, guidance, and activities geared to a variety of student abilities, needs, interests, and vocational choices.
7. To maintain a program of instruction reflective of our community, of the latest educational developments, and of the faculty's judgment.
8. To maintain effective channels of communication with the community.
9. To help students improve their use of leisure time.
10. To recognize special student ability and to provide for its development.
11. To equip each student to take with success and satisfaction the next step, be it educational or vocational.
12. To provide within our school a spirit of responsible freedom and open inquiry.

GENERAL INFORMATION

Program

Newton High School operates on a three term schedule. The fall and spring terms run for seventeen weeks each and the summer term runs for six weeks. During the fall and spring terms all pupils must carry at least four full-time (four periods per week — 2½ credits) prepared subjects and Physical Education. Students must plan for at least one additional course during one of the three years of high school. This additional course must carry at least two credits.

A student who carries five full-time prepared subjects may take a half-time prepared or non-prepared subject in addition to Physical Education.

Special permission from the principal is necessary if a student wants to take six full-time prepared subjects. Junior high school students should ask their counselors to request such permission.

Students may add or drop courses at the beginning of each term.

Credits for Graduation

2½ credits are earned per term by the satisfactory completion of a full-time subject regularly requiring prepared work throughout the term. Other subjects are evaluated on a proportional basis. No credit is recorded for any subject until it has been completed.

To graduate, a student must accumulate a minimum of 65 credits during the three years of high school, must pass English 3, and have taken U. S. History.

Students who can complete their graduation requirements by attendance at a regular Newton High School summer program may participate in the graduation exercises if they so desire.

Students who do not graduate at the regular time will receive their diplomas after they complete the requirements. They will be listed in the class of the calendar year in which they graduate unless they petition the principal to the contrary.

Classification

Students are classified by grades according to the number of graduation credits they have received.

New students must have successfully completed at least three major courses in grade nine in order to enroll in the high school.

A student will be classified as a senior if he is taking enough courses to qualify for graduation.

Special permission from the principal is necessary for a student to graduate in fewer than the normal number of high school years.

Units for College Admission

A unit for entrance to college is earned by two terms of successful work in a full-time prepared subject. Most colleges require sixteen units for admission. To meet this requirement, a candidate for a school of higher learning must complete at least four full-time subjects in grade: IX, and eight full-time 2½ credit subjects in grades X, XI, and XII.

Newton High School offers courses of advanced study in biology, chemistry, English, French, history, mathematics, and physics. Students must have the approval of the faculty to enroll in these. Many colleges grant advanced standing and college credits to students who have completed these courses.

Reports to Colleges

Newton High School reports to colleges all the factual information it has about students. Even though ninth grade work is not counted in computing credits for graduation from the high school, the high school will continue to report to colleges the subjects taken in Grade IX and the marks received.

Reports to colleges carry information on the curriculum designation of each course a student has taken together with a brief description of the emphases in the various curricula.

Curriculum Designation of Courses

On pages five and six of this publication are detailed statements concerning the various divisions into which the curriculum at Newton High School is organized. The purpose and emphasis of each curriculum is described briefly, and the general requirements for students enrolling in a curriculum are listed.

It may be to the advantage of some students to select at the time of registration one or more courses which are not in the curriculum in which they are taking the major portion of their work. Election of courses across curricula in this fashion is encouraged subject to the following restrictions:

1) In a continuing subject (mathematics, foreign language, English) a student may not elect a course in a more demanding curriculum than that in which he has been enrolled unless he has received marks of A or B in the subject concerned for the two marking periods in which he most recently took the subject previous to registration.

2) Students who receive a final grade of D in a curriculum I continuing subject must obtain the permission of the department head to continue in curriculum I.

3) Students taking more demanding courses outside of their normal curriculum pattern must get the approval of their counselors on registration blanks.

4) Students doing acceptable work (C or better) in any subject field are strongly advised not to enroll in a less demanding course.

CURRICULUM I

Curriculum I courses prepare pupils for institutions of higher education, particularly for colleges at which admission is competitive and which require applicants to take College Board subject matter Achievement Tests. These courses demand a high level of academic purpose and achievement.

Grade X Subjects	*Credits per term*	*Terms*
English	2½	2
Mathematics	2½	2
Physical Education	½	2
At least 2 full-time electives (see Notes at right)	5	2

Grade *XI Subjects*	*Credits per term*	*Terms*
English	2½	2
Mathematics	2½	2
U. S. History (required in Grade XI or XII)	2½	2
Physical Education	½	2
At least 1 full-time elective	2½	2
(2 electives, if U. S. History is taken in Grade XII)		

Grade XII Subjects	*Credits per term*	*Terms*
English	2½	2
Physical Education	½	2
At least 3 ful-time electives	7½	2

NOTES ON ELECTIVES

The choice of electives (see pages 7 through 11) will depend largely on the pupil's college objectives. He should consult the college catalogue and his guidance conselor.

While at high school, a student in this curriculum must take two terms and at least five credits in social studies in addition to U. S. History and five credits in Science.

Most students plan to take foreign language for at least 4 terms.

In addition to the subjects listed here for each grade, pupils are encouraged to take additional electives. (See General Information)

CURRICULUM III

Curriculum III is for pupils who do not desire specialized training in trade or business. This curriculum is not designed to prepare students for institutions of higher education. All electives are chosen in consultation with a guidance counselor. A "work experience" program is available to seniors in this curriculum.

Grade X Subjects	*Credits per term*	*Terms*
English	2½	2
World History	2½	2
Science X	2½	2
Basic Business X	2½	2
Pre Industrial Training 1 (Boys)	1¼	2
Family Living 1 (Girls)	1¼	2
Physical Education	½	2
Music or Art	½	2

Grade XI Subjects	*Credits per term*	*Terms*
English	2½	2
U. S. History	2½	2
Science XI	2½	2
Basic Business XI	2½	2
Pre Industrial Training 2 (Boys)	1¼	2
Family Living 2 (Girls)	1¼	2
Physical Education	½	2
1 or 2 electives	2½ to 5	2

Grade XII Subjects	*Credits per term*	*Terms*
English	2½	2
Problems of Democracy	2½	2
Family Living 3 (B & G)	2½	2
Physical Education	½	2
Basic Business XII		
1 or 2 electives	2½ to 5	2

TECHNICAL HIGH SCHOOL
CURRICULUM III T

The Technical Vocational curriculum offers an opportunity whereby pupils may prepare for a skilled or semiskilled job in industry. One-half of the day will be spent in shop and the remainder of the day taking related and high school subjects. A student who completes the training in a particular department will receive a certificate for that trade as well as a high school diploma.

	Credits per term	*Terms*
English	2½	2
Social Studies		
Introduction to Western Tradition	2½	2
U. S. History Problems in Democracy	2½	2
Physical Education	½	2
Driver Education	1	1
Science		
Related Science	2½	2
Physical Science	2½	2
Physics	2½	2
Chemistry	2½	2
Math		
Related Math	2½	2
Basic Math	2½	2
Math II-1, 2, 3, 4,	2½	2
Geometry	2½	2
Algebra	2½	2
Trigonometry	2½	2
Related Mechanical Drawing	2½ - 1¼	2
Shop Talk — Code	1½	2
Select One:		
Auto Mechanics	3½	2
Drafting	3½	2
Electricity	3½	2
Electronics	3½	2
Machine	3½	2
Mill Carpentry	3½	2
*Plant Science	3½	2
Printing	3½	2
Sheet Metal	3½	2

*Plant Science meets 2 periods per day and requires a work experience during the sumer.

Subjects to be chosen from above list in conference with guidance counselor.

CURRICULUM II

Curriculum II courses also prepare students for further education. Some curriculum II students go directly to four year colleges, some to junior colleges and specialized schools, and some directly to work. Within this curriculum students are grouped according to their abilities and interests. Students desiring, and qualified for, further education will receive sound preparation for this. Many students from curriculum II take the College Board Scholastic Aptitude Tests, and some take the Achievement Tests.

Grade X Subjects	*Credits per term*	*Terms*
English	2½	2
Int. to West. Trad.	2½	2
Science (required in X or XI)	2½	2
Physical Education	½	2
At least 1 full-time elective (see Notes at right) (2 electives, if Science is taken in Grade XI)	2½	2
Grade XI Subjects		
English	2½	2
U. S. History	2½	2
Physical Education	½	2
At least 2 full-time electives (1 elective, if Science is taken in Grade XI)	5	2
Grade XII Subjects		
English	2½	2
Problems of Democracy	2½	2
Physical Education	½	2
At least 2 full-time electives	5	2

NOTES ON ELECTIVES

The choice of electives (see pages 7 and 8) will depend largely on educational objectives. The pupil should consult the college catalogue and his guidance counselor.

In addition to the subjects listed here for each grade, pupils are encouraged to take additional electives. (See General Information).

CURRICULUM II — BUSINESS MAJOR

Some students in Curriculum II take courses in business which will prepare them for such fields as accounting, insurance, civil service, selling, bookkeeping, secretarial, and business administration. A number of these students may also attend junior college, secretarial school, or college of business. It is suggested that students with business interests elect a pattern of subjects such as one of those outlined below.

Grade X Subjects	*Credits per term*	*Terms*
English	2½	2
Int. to West. Trad	2½	2
Science	2½	2
*Business Mathematics	2½	2
Typewriting 1	1¼	2
Physical Education	½	2

Grade XI Subjects	*Credits per term*	*Terms*
English	2½	2
U. S. History	2½	2
Physical Education	½	2
One Major Field: A, B, C, or D		

A	*Credits per term*	*Terms*
Bookkeeping 1	2½	2
Shorthand 1	2½	2
Business Law	2½	2
Typewriting 2	1¼	2
B		
Bookkeeping 1	2½	2
Business Law	2½	2
Business Manage.	2½	1

C	*Credits per term*	*Terms*
Bookkeeping 1	2½	2
Cler. Prac. 1	2½	2
Typewriting 2	1¼	2
D		
Bookkeeping 1	2½	2
Business Law	2½	2
Salesmanship	2½	1
Advertising	2½	1

Grade XII Subjects	*Credits per term*	*Terms*
English	2½	2
Problems of Democracy	2½	2
Physical Education	½	2

A	*Credits per term*	*Terms*
Shorthand 2	2½	2
Transcription and Sec. Practice	2½	2
Office Machines	2½	2
B		
Bookkeeping 2	2½	2
Office Machines	2½	2
Data Processing	2½	2
Economics	2½	2

C	*Credits per term*	*Terms*
Clerical Practice 2	2½	2
Salesmanship	2½	1
Office Machines	2½	2
D		
Business Management	2½	1
Salesmanship.	2½	1
Office Machines	2½	2
Economics	2½	2

* Students who have already taken algebra or who choose to take some other course in mathematics will be excused from this requirement.

ELECTIVE SUBJECTS

The subjects listed below may be elected in the term indicated, Fall (F) or Spring (S). When a particular grade level for taking a course is not listed, the subject may be taken in any grade.

Those electives marked with an asterisk (*) require no preparation outside of class hours; all others require home preparation.

A class in an elective subject may not be formed if fewer than twenty pupils have chosen the subject.

The study of two foreign languages may not be started in the same year. In working out their programs, students should plan, if possible, to study any modern language selected for at least three years.

Elective subjects, unless otherwise specified, are for all curricula and are for both boys and girls.

	Term	*Subject*	*Grade Level*	*Periods per Week*	*Credits*
ART	F	Art Appreciation 1	XI or XII	4	2.50
	S	Art Apreciation 2	XI or XII	4	2.50
	F	*Art Major 1		4	2.50
	S	*Art Major 2		4	2.50
	F	*Art Major 3		4	2.50
	S	*Art Major 4		4	2.50
	F	*Art Major 5		4	2.50
	S	*Art Major 6		4	2.50
	F	*Art Minor 1		2	.50
	S	*Art Minor 2		2	.50
	F	*Art Minor 3		2	.50
	S	*Art Minor 4		2	.50
	F	*Ceramics 1		2	.50
	S	*Ceramics 2		2	.50
	F	*Ceramics 3		2	.50
	S	*Ceramics 4		2	.50
	F	Studio 1		2	.50
	S	Studio 2		2	.50
	F	*Art Crafts 1		2	.50
	S	*Art Crafts 2		2	.50
	F	*Art Crafts 3		2	.50
	S	*Art Crafts 4		2	.50
	F	Gen. Humanities		4	2.50
	S	Illustration		4	2.50
BUSINESS	F	*Personal Typewriting 1		2	.50
	S	*Personal Typewriting 2		2	.50
	F	Personal Shorthand 1 (Curriculum I and II)	XI or XII	2	1.25
	S	Personal Shorthand 2 (Curriculum I and II)	XI or XII	2	1.25
	F	Principles of Accounting 1 (Curriculum I and II)	XI or XII	2	1.25
	S	Principles of Accounting 2 (Curriculum I and II)	XI or XII	2	1.25
	F	Principles of Law 1 (Curriculum I and II)	XI or XII	2	1.25
	S	Principles of Law 2 (Curriculum I and II)	XI or XII	2	1.25
	F	*Typewriting 1		4	1.25
	S	*Typewriting 2		4	1.25
	F	*Typewriting 3	XI or XII	4	1.25
	S	*Typewriting 4	XI or XII	4	1.25
	F	Shorthand 1	XI or XII	4	2.50
	S	Shorthand 2	XI or XII	4	2.50
	F	Shorthand 3	XII	4	2.50
	S	Shorthand 4	XII	4	2.50
	F	Transcription and Secretarial Practice 1	XI or XII	4	2.50
	S	Transcription and Secretarial Practice 2	XI or XII	4	2.50
	F	Office Machines 1	XI or XII	4	2.50
	S	Office Machines 2	XI or XII	4	2.50
	F	Business Mathematics 1	X	4	2.50
	S	Business Mathematics 2	X	4	2.50
	F	Bookkeeping 1	XI or XII	4	2.50
	S	Bookkeeping 2	XI or XII	4	2.50
	F	Bookkeeping 3	XII	4	2.50
	S	Bookkeeping 4	XII	4	2.50
	F	Business Law 1	XI or XII	4	2.50
	S	Business Law 2	XI or XII	4	2.50
	F	Basic Business 1	X	4	2.50
	S	Basic Business 2	X	4	2.50
	F	Basic Business 3	XI	4	2.50
	S	Basic Business 4	XI	4	2.50
	F	Basic Business 5	XII	4	2.50
	S	Basic Business 6	XII	4	2.50

	Term	Subject	Grade Level	Periods per Week	Credits
	F	Basic Typing III 1	XI or XII	4	1.25
	S	Basic Typing III 2	XI or XII	4	1.25
	S	Business Management	XI or XII	4	2.50
	F	Clerical Practice 1	XI	4	2.50
	S	Clerical Practice 2	XI	4	2.50
	F	Clerical Practice 3	XII	4	2.50
	S	Clerical Practice 4	XII	4	2.50
	F	Salesmanship	XI or XII	4	2.50
	S	Advertising	XI or XII	4	2.50
	F	Business Data Processing 1		4	2.50
	S	Business Data Processing 2		4	2.50
	F	Economics 1	XI or XII	4	2.50
	S	Economics 2	XI or XII	4	2.50
DRIVING	F or S	*Driver Education	XI or XII	2	1.00
ENGLISH	F or S	Creative Writing	XI or XII	4	2.50
	F	Essential Public Speaking 1	XI or XII	2	1.25
	S	Essential Public Speaking 2	XI or XII	2	1.25
	F or S	Theatre Arts	XI or XII	4	2.50
	F	Journalism 1	XI or XII	2	1.25
	S	Journalism 2	XI or XII	2	1.25
	F	Journalism 3 (H Block)	XI or XII	2	1.25
	S	Journalism 4 (H Block)	XI or XII	2	1.25
	SS	Writing of Verse and Story 3		5	2.50
	F or S	Speech Fund	XI or XII	4	2.50
	F or S	Introduction to Linguistics (H Block)	XI or XII	4	2.50
	S	Philosophy	XII	4	2.50
HOME AND FAMILY	F	Home Economics 1 1		4	2.50
	S	Home Economics 1 2		4	2.50
	F	Home Economics 2 1 (Prerequisite — Home Economics 1)	XI or XII	4	2.50
	S	Home Economics 2 2 (Prerequisite — Home Economics 1)	XI or XII	4	2.50
	F	Home Economics 1 1		2	1.25
	S	Home Economics 1 2		2	1.25
	F	Home & Society	XI or XII	4	2.50
	S	Home & Society (Boys)	XI or XII	4	2.50
	S	Child Development	XI or XII	4	2.50
	F	Advanced Foods (Prerequisite — Home Economics 2)	XI or XII	4	2.50
	F	Advanced Clothing 1	XI or XII	4	2.50
	S	Advanced Clothing 2	XI or XII	4	2.50
	F	Design, Home Management 1	XI or XII	4	2.50
	F	Family Living 1 1 (Curriculum III)	X	4	2.50
	S	Family Living 1 2 (Curriculum III)	X	4	2.50
	F	Family Living 2 3 (Curriculum III)	XI	4	2.50
	S	Family Living 2 4 (Curriculum III)	XI	4	2.50
	F	Child Care 1 } Work Program			2.50
	S	Child Care 2 }			2.50
INDUSTRIAL ARTS	F or S	Industrial Crafts 1		4	1.25
	S	Industrial Crafts 2		4	1.25
	F or S	Industrial Crafts 3		4	1.25
	S	Industrial Crafts 4		4	1.25
	F or S	Technical Drawing 1		2	1.25
	S	Technical Drawing 2		2	1.25
	F or S	Technical Drawing 3		2	1.25
	S	Technical Drawing 4		2	1.25
	F or S	Technical Drawing 5		2	1.25
	S	Technical Drawing 6		2	1.25
	F or S	Technical Drawing 1 & 2		4	2.50
	S	Technical Drawing 2 & 3		4	2.50
	F or S	Technical Drawing 3 & 4		4	2.50
	S	Technical Drawing 4 & 5		4	2.50
	F or S	Technical Drawing 5 & 6		4	2.50

	Term	*Subject*		*Grade Level*	*Periods per Week*	*Credits*
	F or S	Fundamentals of Engineering 1			4	2.50
	S	Fundamentals of Engineering 2			4	2.50
	F or S	Fundamentals of Engineering 3			4	2.50
	S	Fundamentals of Engineering 4			4	2.50
	F	Stage Techniques 1			2	.50
	S	Stage Techniques 2			2	.50
	F or S	Electronics 1			4	2.50
	S	Electronics 2			4	2.50
	F or S	Pre-Industrial Training 1			4	2.50
	S	Pre-Industrial Training 2			4	2.50
	F	Electronics-Mechanical Devices 1	Work Program		5	2.50
	S	Electronics-Mechanical Devices 2			5	2.50
LANGUAGE	F	French Ia 1	1st year		4	2.50
	S	French Ia 2			4	2.50
	F	French Ia 3	2nd year		4	2.50
	S	French Ia 4			4	2.50
	F	French Ia 5	3rd year		4	2.50
	S	French Ia 6			4	2.50
	F	French I 1	1st year		4	2.50
	S	French I 2			4	2.50
	F	French I 3	2nd year		4	2.50
	S	French I 4			4	2.50
	F	French I 5	3rd year		4	2.50
	S	French I 6			4	2.50
	F	French I 7	4th year		4	2.50
	S	French I 8			4	2.50
	F	French I 9	5th year	H Block	4	2.50
	S	French I 10		H Block	4	2.50
	F	French II 1	1st year		4	2.50
	S	French II 2			4	2.50
	F	French II 3	2nd year		4	2.50
	S	French II 4			4	2.50
	F	French II 5	3rd year		4	2.50
	S	French II 6			4	2.50
	F	French II 7	4th year		4	2.50
	S	French II 8			4	2.50
	F	German 1	1st year		4	2.50
	S	German 2			4	2.50
	F	German 3	2nd year		4	2.50
	S	German 4			4	2.50
	F	German 5	3rd year		4	2.50
	S	German 6			4	2.50
	F	German 7	4th year		4	2.50
	S	German 8			4	2.50
	F	Latin I 1	1st year		4	2.50
	S	Latin I 2			4	2.50
	F	Latin I 3	2nd year		4	2.50
	S	Latin I 4			4	2.50
	F	Latin I 5	3rd year		4	2.50
	S	Latin I 6			4	2.50
	F	Latin I 7	4th year		4	2.50
	S	Latin I 8			4	2.50
	F	Latin II 1	1st year		4	2.50
	S	Latin II 2			4	2.50
	F	Latin II 3	2nd year		4	2.50
	S	Latin II 4			4	2.50
	F	Latin II 5	3rd year		4	2.50
	S	Latin II 6			4	2.50
	F	Latin II 7	4th year		4	2.50
	S	Latin II 8			4	2.50
	F	Russian 1 1	1st year	(Curr. I)	4	2.50
	S	Russian 1 2		(Curr. I)	4	2.50
	F	Russian 1 3	2nd year	(Curr. I)	4	2.50
	S	Russian 1 4		(Curr. I)	4	2.50
	F	Russian 1 5	3rd year	(Curr. I)	4	2.50
	S	Russian 1 6		(Curr. I)	4	2.50
	F	Spanish I 1	1st year		4	2.50
	S	Spanish I 2			4	2.50
	F	Spanish I 3	2nd year		4	2.50
	S	Spanish I 4			4	2.50
	F	Spanish I 5	3rd year		4	2.50
	S	Spanish I 6			4	2.50

	Term	Subject			Grade Level	Periods per Week	Credits
	F	Spanish II 1	1st year			4	2.50
	S	Spanish II 2				4	2.50
	F	Spanish II 3	2nd year			4	2.50
	S	Spanish II 4				4	2.50
	F	Spanish II 5	3rd year			4	2.50
	S	Spanish II 6				4	2.50
		(Students in modern foreign languages may be assigned two additional periods per week in the language laboratory.)					
MATHEMATICS	F	Math Ia 1	1st year			4	2.50
	S	Math Ia 2				4	2.50
	F	Math Ia 3	2nd year			4	2.50
	S	Math Ia 4				4	2.50
	F	Math Ia 5	3rd year			4	2.50
	S	Math Ia 6				4	2.50
	F	Math I 1	1st year			4	2.50
	S	Math I 2				4	2.50
	F	Math I 3	2nd year			4	2.50
	S	Math I 4				4	2.50
	F	Math I 5	3rd year			4	2.50
	S	Math I 6				4	2.50
	F	Math II 1	1st year			4	2.50
	S	Math II 2				4	2.50
	F	Math II 3	2nd year			4	2.50
	S	Math II 4				4	2.50
	F	Math II 5	3rd year			4	2.50
	S	Math II 6				4	2.50
	F	UI Math I 1	1st year			4	2.50
	S	UI Math I 2				4	2.50
	F	UI Math I 3	2nd year			4	2.50
	S	UI Math I 4				4	2.50
	F	UI Math I 5	3rd year			4	2.50
	S	UI Math I 6				4	2.50
	F	Basic Math 1	1st year			4	2.50
	S	Basic Math 2				4	2.50
	F	Basic Math 3	2nd year			4	2.50
	S	Basic Math 4				4	2.50
	F	Computers 1				2	1.25
	S	Computers 2				2	1.25
	F or S	Consumer Math				4	2.50
	F	Prob. & Stat.				4	2.50
	S	Matrix Algebra				4	2.50
	F	Elementary Algebra 1				4	2.50
	F or S	Elementary Algebra 2				4	2.50
	F	Seminar Algebra 1		H. Block	XI or XII	1	.50
	S	Seminar Algebra 2		H. Block	XI or XII	1	.50
	F	Seminar Anal. 1		H. Block	XI or XII	1	.50
	S	Seminar Anal. 2		H. Block	XI or XII	1	.50
MUSIC	F	Music Appreciation 1				4	2.50
	S	Music Appreciation 2				4	2.50
	F	Theory of Music 1				4	2.50
	S	Theory of Music 2				4	2.50
	F	Theory of Music 3				4	2.50
	S	Theory of Music 4				4	2.50
	F or S	General Humanities				4	2.50
	F	*A Capella Choir 4 1				4	1.25
	S	*A Capella Choir 4 2				4	1.25
	F	*A Capella Choir 2 1				2	.50
	S	*A Capella Choir 2 2				2	.50
	F	*Voice Training 1				2	1.25
	S	*Voice Training 2				2	1.25
	F	*Girls Chorus 1				2	.50
	S	*Girls Chorus 2				2	.50
	F	*Girls Choir 1				2	.50
	S	*Girls Choir 2				2	.50
	F or S	Music for Living				4	2.50
	F	Instrumental Performance 1				4	2.50
	S	Instrumental Performance 2				4	2.50
	F	Instrumental Performance 1				4	1.25
	S	Instrumental Performance 2				4	1.25
	F	Madrigal Singers 1			H. Block	2	1.25
	S	Madrigal Singers 2			H. Block	2	1.25

	Term	*Subject*		*Grade Level*	*Periods per Week*	*Credits*
SCIENCE	F	Biology I 1		X	4	2.50
	S	Biology I 2		X	4	2.50
	F	Biology II 1		X	4	2.50
	S	Biology II 2		X	4	2.50
	F	Biology IIB 1		X	4	2.50
	S	Biology IIB 2		X	4	2.50
	F	Chemistry I 1		XI or XII	5	2.50
	S	Chemistry I 2		XI or XII	5	2.50
	F	Chemistry I 1-Seminar			1	.25
	S	Chemistry I 2-Seminar			1	.25
	F	Chemistry II 1		XI or XII	5	2.50
	S	Chemistry II 2		XI or XII	5	2.50
	F	Chemistry II 1-Seminar			1	.25
	S	Chemistry II 2-Seminar			1	.25
	F	Physics I 1		XI or XII	5	2.50
	S	Physics I 2		XI or XII	5	2.50
	F	Physics II 1		XI or XII	5	2.50
	S	Physics II 2		XI or XII	5	2.50
	F	Survey of Science II 1		XI or XII	4	2.50
	S	Survey of Science II 2		XI or XII	4	2.50
	F	Phy. Sci. I II 1			4	2.50
	S	Phy. Sci. I II 2			4	2.50
	F	Science III 1		X	4	2.50
	S	Science III 2		X	4	2.50
	F	Science III 3		XI	4	2.50
	S	Science III 4		XI	4	2.50
	F	Science IIIs 1		X	4	2.50
	S	Science IIIs 2		X	4	2.50
	F	Science IIIs 3		XI	4	2.50
	S	Science IIIs 4		XI	4	2.50
	F	Advanced Biology 1 (Chemistry prerequisite)	H. Block	XI or XII	6	2.50
	S	Advanced Biology 2 (Chemistry prerequisite)	H. Block	XI or XII	6	2.50
	F	Advanced Chemistry 1	H. Block		6	2.50
	S	Advanced Chemistry 2	H. Block		6	2.50
SOCIAL STUDIES	F	European History Ia 1			4	2.50
	S	European History Ia 2			4	2.50
	F	Probs. Democracy 1 1			4	2.50
	S	Probs. Democracy I 2			4	2.50
	F	European History I 1			4	2.50
	S	European History I 2			4	2.50
	F	Ancient History I 1			4	2.50
	S	Ancient History I 2			4	2.50
	F	Probs. Democracy II 1			4	2.50
	S	Probs. Democracy II 2			4	2.50
	F	Probs. Democracy II 1			4	2.50
	S	Probs. Democracy II 2			4	2.50
	F	Probs. Democracy III 1			4	2.50
	S	Probs. Democracy III 2			4	2.50
	F	Probs. Democracy IIIs 1			4	2.50
	S	Probs Democracy IIIs 2			4	2.50
	F	Geography 1			4	2.50
	S	Geography 2			4	2.50
	F	Psychology 1			2	1.25
	S	Psychology 2			2	1.25
TECHNICAL VOCATIONAL						
	F or S	Fund of Auto			4	2.50
	F	Electronics 1			4	2.50
	S	Electronics 2			4	2.50
	F	Plant Science 1			10	3.50
	S	Plant Science 2			10	3.50
	F or S	Auto Shop			4	1.25
	F or S	Electronics Shop			4	1.25

SPECIAL SERVICES

Pupils often have individual needs which can be met only with difficulty in regular class sessions. So far as its facilities and the size of its staff will permit, Newton High School offers to its pupils special services. The services are as follows:

Reading Clinic
Speech Clinic
Testing programs, in aptitude and achievement
Physical examinations and health services
Guidance: educational, vocational, and personal

EXTRA-CURRICULAR ACTIVITIES

The school offers its pupils a variety of activities which are held outside class hours. These opportunities are described in the *Orange Book,* a separate publication, which is distributed to all sophomores in the fall.

SUMMER SCHOOL 1967

Students may take courses on a full-credit basis in the summer at Newton High School. The following courses are offered:

Automobile Repair
Biology
Chemistry
Driver Education
English Literature
French
Improvement in Reading
Music
Psychology
Recreation - Fitness
Shorthand
Typewriting
U. S. History
Western Tradition
Writing of Verse and Story

Students who intend to take these courses should plan their regular programs for 1967-1968 accordingly.

In addition to the above courses, the Summer School provides a wide selection of courses designed to help the student improve his academic foundation or make up some deficiency. Enrollment in this latter type of work takes place in June.

PROGRAM CHANGES

The program selected by the pupil in the early spring of each year represents a final choice of courses for the following year, with two exceptions:

1. If a student has completed satisfactorily by summer school study or a September make-up examination courses failed or incomplete in June, he may apply for a program change.
2. If a student's educational objectives have clearly altered, an individual interview with a counselor *before* the opening day of school may result in a recommendation for a change.

We do *not* make program changes on the basis of notes sent to the school.

DURING THE LATTER PART OF AUGUST, ALL STUDENTS WILL RECEIVE WRITTEN NOTICE OF PROCEDURES FOR THE OPENING OF SCHOOL.

I. B. M. CODE NUMBERS — 1967-68

List subjects on your registration cards in the same numerical order in which they appear below. Make sure that your code numbers indicate the proper curriculum and term of subject. Note that students signing up for 2 term courses should enter both.

Term	*Course Code*	*Course*	*Periods Per Week*	*Credits Per Term*
PHYSICAL EDUCATION				
F	021	Phys. Ed. Boys 1	2	.50
S	022	Phys. Ed. Boys 2	2	.50
F	023	Phys. Ed. Boys 3	2	.50
S	024	Phys. Ed. Boys 4	2	.50
F	025	Phys. Ed. Boys 5	2	.50
S	026	Phys. Ed. Boys 6	2	.50
F	041	Phys. Ed. Girls 1	2	.50
S	042	Phys. Ed. Girls 2	2	.50
F	043	Phys. Ed. Girls 3	2	.50
S	044	Phys. Ed. Girls 4	2	.50
F	045	Phys. Ed. Girls 5	2	.50
S	046	Phys. Ed. Girls 6	2	.50
F	047	Phys. Ed. Girls 7	3	.50
S	048	Phys. Ed. Girls 8	3	.50
ENGLISH				
F	101	English Ia 1	4	2.50
S	102	English Ia 2	4	2.50
F	103	English Ia 3	4	2.50
S	104	English Ia 4	4	2.50
F	105	English Ia 5	4	2.50
S	106	English Ia 6	4	2.50
F	111	English I 1	4	2.50
S	112	English I 2	4	2.50
F	113	English I 3	4	2.50
S	114	English I 4	4	2.50
F	115	English I 5 H Block (some sec.)	4	2.50
S	116	English I 5 H Block (some sec.)	4	2.50
S	117	Senior Assess. in Eng.	3	2.50
F	121	English II 1	4	2.50
S	122	English II 2	4	2.50
F	123	English II 3	4	2.50
S	124	English II 4	4	2.50
F	125	English II 5	4	2.50
S	126	English II 6	4	2.50
S	127R	Rep. of Courses 111 & 121	4	2.50
S	128W	Rep. of Courses 111 & 121	4	2.50
F	161	English II 1	4	2.50
S	162	English II 2	4	2.50
F	163	English II 3	4	2.50
S	164	English II 4	4	2.50
F	165	English II 5	4	2.50
S	166	English II 6	4	2.50
F	131	English III 1	4	2.50
S	132	English III 2	4	2.50
F	133	English III 3	4	2.50
S	134	English III 4	4	2.50
F	135	English III 5	4	2.50
S	136	English III 6	4	2.50
F	137	English IIIs 1	4	2.50
S	138	English IIIs 2	4	2.50
F	139	English IIIs 3	4	2.50
S	130	English IIIs 4	4	2.50
F	230	English IIIs 5	4	2.50
S	231	English IIIs 6	4	2.50
ForS	150	Creative Writing	4	2.50
F	151	Essen Pub Spk 1	2	1.25
S	152	Essen Pub Spk 2	2	1.25
ForS	153	Theatre Arts	4	2.50
F	154	Journalism 1	2	1.25
S	155	Journalism 2	2	1.25
F	156	Journalism 3 H. Block	2	1.25
S	157	Journalism 4 H. Block	2	1.25
SS	158	Writing of Verse & Story 3	5	2.50
ForS	159	Speech Fund	4	2.50
ForS	170	Introduction to Linguistics XI XII H. Block	4	2.50
S	171	Philosophy	4	2.50

Term	*Course Code*	*Course*		*Periods Per Week*	*Credits Per Term*
LANGUAGES					
F	201	French Ia 1		4	2.50
S	202	French Ia 2		4	2.50
F	203	French Ia 3		4	2.50
S	204	French Ia 4		4	2.50
F	205	French Ia 5		4	2.50
S	206	French Ia 6		4	2.50
F	211	French I 1		4	2.50
S	212	French I 2		4	2.50
F	213	French I 3		4	2.50
S	214	French I 4		4	2.50
F	215	French I 5		4	2.50
S	216	French I 6		4	2.50
F	217	French I 7		4	2.50
S	218	French I 8		4	2.50
F	219	French I 9	H. Block	4	2.50
S	210	French I 10	H. Block	4	2.50
F	251	Russian I 1		4	2.50
S	252	Russian I 2		4	2.50
F	253	Russian I 3		4	2.50
S	254	Russian I 4		4	2.50
F	255	Russian I 5		4	2.50
S	256	Russian I 6		4	2.50
F	221	French II 1		4	2.50
S	222	French II 2		4	2.50
F	223	French II 3		4	2.50
S	224	French II 4		4	2.50
F	225	French II 5		4	2.50
S	226	French II 6		4	2.50
F	227	French II 7		4	2.50
S	228	French II 8		4	2.50
F	271	German 1		4	2.50
S	272	German 2		4	2.50
F	273	German 3		4	2.50
S	274	German 4		4	2.50
F	275	German 5		4	2.50
S	276	German 6		4	2.50
F	277	German 7		4	2.50
S	278	German 8		4	2.50
F	311	Latin I 1		4	2.50
S	312	Latin I 2		4	2.50
F	313	Latin I 3		4	2.50
ForS	314	Latin I 4		4	2.50
ForS	315	Latin I 5		4	2.50
S	316	Latin I 6		4	2.50
F	317	Latin I 7		4	2.50
S	318	Latin I 8		4	2.50
F	351	Spanish I 1		4	2.50
S	352	Spanish I 2		4	2.50
F	353	Spanish I 3		4	2.50
S	354	Spanish I 4		4	2.50
F	355	Spanish I 5		4	2.50
S	356	Spanish I 6		4	2.50
F	321	Latin II 1		4	2.50
S	322	Latin II 2		4	2.50
F	323	Latin II 3		4	2.50
S	324	Latin II 4		4	2.50
F	325	Latin II 5		4	2.50
S	326	Latin II 6		4	2.50
F	327	Latin II 7		4	2.50
S	328	Latin II 8		4	2.50
F	341	Spanish II 1		4	2.50
S	342	Spanish II 2		4	2.50
F	343	Spanish II 3		4	2.50
S	344	Spanish II 4		4	2.50
F	345	Spanish II 5		4	2.50
S	346	Spanish II 6		4	2.50

Term	Course Code	Course	Periods Per Week	Credits Per Term
SOCIAL STUDIES				
F	401	Eur. Hist. Ia 1	4	2.50
S	402	Eur. Hist. Ia 2	4	2.50
F	410	Int. Wst. Tra I 1	4	2.50
S	411	Int. Wst. Tra. I 2	4	2.50
F	412	US Hist. I 2	4	2.50
S	413	US Hist. I 2	4	2.50
F	414	US Hist 1	4	2.50
S	415	US Hist. 2	4	2.50
F	416	Probs. Dem. I 1	4	2.50
S	417	Probs. Dem. I 2	4	2.50
F	418	Eur. Hist I 1	4	2.50
S	419	Eur. Hist, I 2	4	2.50
F	450	Ancient Hist. I 1	4	2.50
S	451	Ancient Hist I 2	4	2.50
F	420	Int. Wst. Trd. II 1	4	2.50
S	421	Int. Wst. Trd. II 2	4	2.50
F	422	US Hist. II 1	4	2.50
S	423	US Hist II 2	4	2.50
F	424	Probs. Dem. II 1	4	2.50
S	425	Probs. Dem. II 2	4	2.50
F	461	Int. Wst. Trd. II 1	4	2.50
S	462	Int. Wst. Trd. II 2	4	2.50
F	463	US Hist II 1	4	2.50
S	464	US Hist. II 2	4	2.50
F	465	Probs. Dem. II 1	4	2.50
S	466	Probs. Dem. II 2	4	2.50
F	430	Wld. Hist. III 1	4	2.50
S	431	Wld. Hist III 2	4	2.50
F	432	US Hist III 1	4	2.50
S	433	US Hist. III 2	4	2.50
F	434	Probs. Dem. III 1	4	2.50
S	435	Probs. Dem. III 2	4	2.50
F	436	Wld. Hist. IIIs 1	4	2.50
S	437	Wld. Hist IIIs 2	4	2.50
F	438	US Hist IIIs 1	4	2.50
S	439	US Hist. IIIs 2	4	2.50
F	232	Prob. Dem. IIIs 1	4	2.50
S	233	Prob. Dem. IIIs 2	4	2.50
F	426	Geography 1	4	2.50
S	427	Geography 2	4	2.50
F	428	Psychology 1 H Block	2	1.25
S	429	Psychology 2 H Block	2	1.25
MATHEMATICS				
F	501	Math Ia 1	4	2.50
S	502	Math Ia 2	4	2.50
F	503	Math Ia 3	4	2.50
S	504	Math Ia 4	4	2.50
F	505	Math Ia 5	4	2.50
S	506	Math Ia 6	4	2.50
F	511	UI Math I 1	4	2.50
S	512	UI Math I 2	4	2.50
F	513	UI Math I 3	4	2.50
S	514	UI Math I 4	4	2.50
F	515	UI Math I 5	4	2.50
S	516	UI Math I 6	4	2.50
F	517	Prob. & Stat.	4	2.50
S	518	Matrix Alg.	4	2.50
F	519	Seminar Alg. 1 H. Block	1	.50
S	510	Seminar Alg. 2 H. Block	1	.50
F	561	Basic Math I	4	2.50
S	562	Basic Math 2	4	2.50
F	563	Basic Math 3	4	2.50
S	564	Basic Math 4	4	2.50
ForS	565	Consumer Math	4	2.50
F	551	Math I 1	4	2.50
S	552	Math I 2	4	2.50
F	553	Math I 3	4	2.50
S	554	Math I 4	4	2.50
F	555	Math I 5	4	2.50
S	556	Math I 6	4	2.50
F	557	Computers 1	2	1.25
S	558	Computers 2	2	1.25
F	559	Seminar Anal. 1 H. Block	1	.50
S	550	Seminar Anal. 2 H. Block	1	.50

Term	Course Code	Course	Periods Per Week	Credits Per Term
MATHEMATICS (Continued)				
F	521	Math II 1	4	2.50
S	522	Math II 2	4	2.50
F	523	Math II 3	4	2.50
S	524	Math II 4	4	2.50
F	525	Math II 5	4	2.50
S	526	Math II 6	4	2.50
F	527	Elem. Alg. 1	4	2.50
ForS	528	Elem. Alg. 2	4	2.50
SCIENCE				
F	600	Adv. Biology I H. Block	6	2.50
S	601	Adv. Biology 2 H. Block	6	2.50
F	602	Adv. Chemistry I H. Block	6	2.50
S	603	Adv. Chemistry 2 H. Block	6	2.50
F	604	Adv. Coll. Physics 1 H. Block	6	2.50
S	605	Adv. Coll. Physics 2 H. Block	6	2.50
F	610	Biology I 1	4	2.50
S	611	Biology I 2	4	2.50
F	612	Chemistry I 1	5	2.50
S	613	Chemistry I 2	5	2.50
F	614	Chemistry I — Seminar 1	1	.25
S	615	Chemistry I — Seminar 2	1	.25
F	616	Physics I 1	5	2.50
S	617	Physics I 2	5	2.50
F	620	Biology II 1	4	2.50
S	621	Biology II 2	4	2.50
F	622	Chemistry II 1	5	2.50
S	623	Chemistry II 2	5	2.50
F	624	Chemistry II — Seminar 1	1	.25
S	625	Chemistry II — Seminar 2	1	.25
F	626	Phy. Sci. I 11 1	4	2.50
S	627	Phy. Sci. I 11 2	4	2.50
F	628	Physics II 1	5	2.50
S	629	Physics II 2	5	2.50
F	630	Science III 1 X	4	2.50
S	631	Science III 2 X	4	2.50
F	632	Science III 3 XI	4	2.50
S	633	Science III 4 XI	4	2.50
F	634	ScienceIIIs 1 X	4	2.50
S	635	Science IIIs 2 X	4	2.50
F	636	Science IIIs 3 XI	4	2.50
S	637	Science IIIs 4 XI	4	2.50
F	660	Biology IIB 1	4	2.50
S	661	Biology IIB 2	4	2.50
F	662	Survey Sci. 1	4	2.50
S	663	Survey Sci. 2	4	2.50
BUSINESS				
F	710	Pers. Type 1	2	.50
S	711	Pers. Type 2	2	.50
F	712	Pers. Short 1	2	1.25
S	713	Pers. Short 2	2	1.25
F	714	Prin. Acctg. 1	2	1.25
S	715	Prin. Acctg. 2	2	1.25
F	716	Prin. Law 1	2	1.25
S	717	Prin. Law 2	2	1.25
F	720	Typewriting 1	4	1.25
S	721	Typewriting 2	4	1.25
F	722	Typewriting 3	4	1.25
S	723	Typewriting 4	4	1.25
F	724	Shorthand I 1	4	2.50
S	725	Shorthand I 2	4	2.50
F	726	Shorthand II 1	4	2.50
S	727	Shorthand II 2	4	2.50
F	728	Transcription and Secretarial Practice 1	4	2.50
S	729	Transcription and Secretarial Practice 2	4	2.50
F	740	Office Mach. 1	4	2.50
S	741	Office Mach. 2	4	2.50
F	742	Bus. Math 1	4	2.50
S	743	Bus. Math 2	4	2.50
F	744	Bookkeeping 1	4	2.50
S	745	Bookkeeping 2	4	2.50
F	746	Bookkeeping 3	4	2.50

Term	Course Code	Course	Periods Per Week	Credits Per Term
BUSINESS (Continued)				
S	747	Bookkeeping 4	4	2.50
F	748	Business Law 1	4	2.50
S	749	Business Law 2	4	2.50
F	730	Basic Bus. X 1	4	2.50
S	731	Basic Bus. X 2	4	2.50
F	732	Basic Bus. XI 3	4	2.50
S	733	Basic Bus. XI 4	4	2.50
F	734	Basic Bus. XII 5	4	2.50
S	735	Basic Bus. XII 6	4	2.50
F	736	Basic Type 1	4	1.25
S	737	Basic Type 2	4	1.25
F	738	Work Program III 1	15	5.00
S	739	Work Program III 2	15	5.00
S	760	Bus. Manage. 2	4	2.50
F	761	Cler. Pract. 1	4	2.50
S	762	Cler. Pract. 2	4	2.50
F	763	Cler. Pract. 3	4	2.50
S	764	Cler. Pract. 4	4	2.50
F	765	Salesmanship	4	2.50
S	766	Advertising	4	2.50
F	767	Bus. Data Proc. 1	4	2.50
S	768	Bus. Data Proc. 2	4	2.50
F	769	Economics 1	4	2.50
S	780	Economics 2	4	2.50
F	781	Bus. Work Program 1	12	2.50
S	782	Bus. Work Program 2	12	2.50
ART				
F	800	Art Appreciat. 1	4	2.50
S	801	Art Appreciat. 2	4	2.50
F	802	Art Major 1	4	2.50
S	803	Art Major 2	4	2.50
F	804	Art Major 3	4	2.50
S	805	Art Major 4	4	2.50
F	806	Art Major 5	4	2.50
S	807	Art Major 6	4	2.50
F	808	Art Minor 1	2	.50
S	809	Art Minor 2	2	.50
F	810	Art Minor 3	2	.50
S	811	Art Minor 4	2	.50
F	812	Ceramics 1	2	.50
S	813	Ceramics 2	2	.50
F	814	Ceramics 3	2	.50
S	815	Ceramics 4	2	.50
F	816	Studio 1	2	.50
S	817	Studio 2	2	.50
F	818	Art Crafts 1	2	.50
S	819	Art Crafts 2	2	.50
F	870	Art Crafts 3	2	.50
S	871	Art Crafts 4	2	.50
S	872	Illustration	4	2.50
F	864	Gen. Human.	4	2.50
HOME AND FAMILY				
F	820	Home Ec. I 1	4	2.50
S	821	Home Ec. I 2	4	2.50
F	822	Home Ec. II 1	4	2.50
S	823	Home Ec. II 2	4	2.50
F	824	Home Ec. I 1	2	1.25
S	825	Home Ec. I 2	2	1.25
F	826	Home & Society	4	2.50
S	827	Home & Society (Boys)	4	2.50
S	828	Child Devel.	4	2.50
F	829	Advanced Foods	4	2.50
F	840	Advanced Clothing	4	2.50
S	841	Advanced Clothing	4	2.50
F	842	Design. Home Manage.	4	2.50
F	843	Fam. Liv. 1 III	4	2.50
S	844	Fam. Liv. 2 III	4	2.50
F	845	Fam. Liv. 3 III	4	2.50
S	846	Fam. Liv. 4 III	4	2.50
F	847	Work-Study 1		2.50
S	848	Work-Study 2		2.50
SS	849	Work-Study 3		2.50

Term	Course Code	Course	Periods Per Week	Credits Per Term
HOME AND FAMILY (Continued)				
SS	860	Foods		2.50
F	861	Child Care 1		2.50
S	862	Child Care 2		2.50
SS	863	Child Care 3		2.50
INDUSTRIAL ARTS				
ForS	865	Ind Crafts 1	4	1.25
S	866	Ind Crafts 2	4	1.25
ForS	867	Ind Crafts 3	4	1.25
S	868	Ind Crafts 4	4	1.25
ForS	869	Tech Draw 1	2	1.25
S	880	Tech Draw 2	2	1.25
ForS	881	Tech Draw 3	2	1.25
S	882	Tech Draw 4	2	1.25
ForS	883	Tech Draw 5	2	1.25
S	884	Tech Draw 6	2	1.25
ForS	885	Tech Draw 1 & 2	4	2.50
S	886	Tech Draw 2 & 3	4	2.50
ForS	887	Tech Draw 3 & 4	4	2.50
S	888	Tech Draw 4 & 5	4	2.50
ForS	889	Tech Draw 5 & 6	4	2.50
ForS	890	Fund of Engr. 1	4	2.50
S	891	Fund of Engr. 2	4	2.50
ForS	892	Fund of Engr. 3	4	2.50
S	893	Fund of Engr. 4	4	2.50
F	894	Stage Tech 1	2	.50
S	895	Stage Tech 2	2	.50
ForS	896	Electronics 1	4	2.50
S	897	Electronics 2	4	2.50
ForS	898	Pre Ind Trg 1	4	2.50
S	899	Pre Ind Trg 2	4	2.50
F	877	Electro-Mech. Devices 1	5	2.50
S	878	Electro-Mech. Devices 2	5	2.50
F	879	Electro-Mech. Devices 1 Work-study	15	2.50
S	907	Electro-Mech. Devices 2 Work-study	15	2.50
MUSIC				
F	850	Music Appreciat 1	4	2.50
S	851	Music Appreciat 2	4	2.50
F	852	Theory Music 1	4	2.50
S	853	Theory Music 2	4	2.50
F	854	Theory Music 3	4	2.50
S	855	Theory Music 4	4	2.50
ForS	856	General Humani.	4	2.50
F	830	A Cappella Ch 1	4	1.25
S	831	A Cappella Ch 2	4	1.25
F	832	A Cappella Ch 1	2	.50
S	833	A Cappella Ch 2	2	.50
F	834	Voice Trng. 1	2	1.25
S	835	Voice Trng. 2	2	1.25
F	836	Girls Chorus 1	2	.50
S	837	Girls Chorus 2	2	.50
F	838	Girls Choir 1	2	.50
S	839	Girls Choir 2	2	.50
ForS	857	Music for Liv.	4	2.50
F	858	Inst. Per. 1	4	2.50
S	859	Inst. Per. 2	4	2.50
F	873	Inst. Per. 1	4	1.25
S	874	Inst. Per. 2	4	1.25
F	875	Madrigal Singers 1 H. Block	2	1.25
S	876	Madrigal Singers 2 H. Block	2	1.25
TECHNICAL VOCATIONAL				
ForS	900	Fund. of Auto	4	2.50
F	901	Electronics 1	4	2.50
S	902	Electronics 2	4	2.50
F	903	Plant Sci. 1	10	3.50
S	904	Plant Sci. 2	10	3.50
ForS	905	Auto Shop	4	1.25
ForS	906	Electronics Shop	4	1.25
DRIVER EDUCATION				
ForS	908	Driver Ed.	2	1.00

HOW TO PROCEED WITH REGISTRATION

1) Make a decision on the courses you plan to take on the basis of your past record, the plans you have for the future, and the information in this publication.

2) On the work sheet below fill in the exact courses you plan to study with their correct numbers taken from the list on pages 13-15. Arrange courses on a work sheet in numerical order by course numbers with the smallest numbers at the top. Be sure you select the correct course in each subject field after consultation with teachers. You must enter Physical Education.

3) When you receive your *registration blank* copy the data from your work sheet on it accurately in ink.

4) Obtain your parent's approval on the *registration blank* and turn it in as directed.

5) Be sure to register for both fall and spring terms.

Next Year 1967-68

FIRST TERM

	Course Code			Exact name of course	Per-Wk.	Credits
1						
2						
3						
4						
5						
6						
7						
8						
				Totals		

Next Year 1967-68

SECOND TERM

	Course Code			Exact name of course	Per-Wk.	Credits
1						
2						
3						
4						
5						
6						
7						
8						
				Totals		

BELL SCHEDULE

8:05	Bell — Pupils allowed in Building
8:15	First Period
9:04	Passing Bell
9:10	Second Period
9:59	Passing Bell
10:05	Third Period
10:54	Passing Bell
11:00	Home Room
11:10	Passing Bell
11:16	Fourth Period (including lunch)
12:49	Passing Bell (except lunch)
1:00	Fifth Period
1:49	Passing Bell
1:55	Sixth Period
2:45	Passing Bell
2:51	Seventh Period
3:40	Passing Bell
3:46	Eighth Period
4:35	End of Eighth Period

FOURTH PERIOD SCHEDULE OF LUNCHES

Lunch	*Leave for Lunch (Bell)*	*Return to Class (Gong)*	*Back in Class (Bell)*
A	11:16	11:41	11:45
B	11:41	12:06	12:10
C	12:06	12:31	12:35
D	12:31	12:56	1:00

SCHEDULE OF BLOCKS

1.	A_1	B_2	A_2	A_3	A_4
2.	B_1	C_2	C_3	B_3	B_4
3.	C_1	X_1	D_2	X_2	C_4

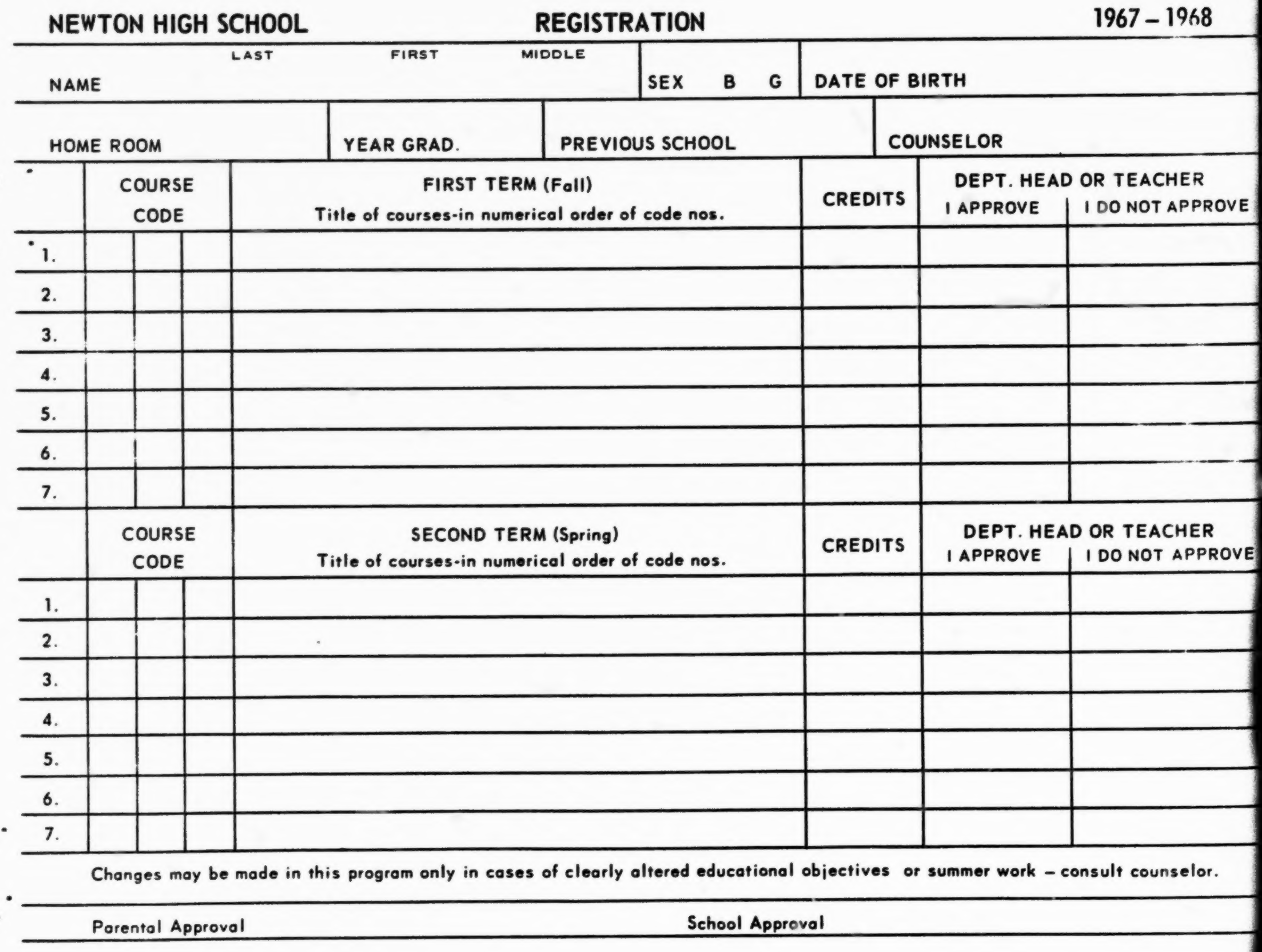
HOME ROOM

4.	D_1	G_2	F_2	E_4	D_4
5.	G_1	E_2	G_3	D_3	F_4
6.	E_1	F_1	E_3	F_3	G_4
7.	H_1	I_1	H_3	I_3	H_5
8.	H_2	I_2	H_4	I_4	H_6

Note: All classes will meet A through G blocks, unless otherwise noted. Faculty meetings will be held in I_1 and $_2$ blocks, club meetings in I_3 and $_4$ blocks.

Appendix D: Registration Card for Newton High School

Each ninth grade student normally receives a white registration card to be filled out and turned in to the Guidance Office. For the purposes of this project this card was reproduced on blue paper for use in practice before filling out the final white card.



NEWTON HIGH SCHOOL **REGISTRATION** **1967 – 1968**

NAME LAST FIRST MIDDLE	SEX B G	DATE OF BIRTH

HOME ROOM	YEAR GRAD.	PREVIOUS SCHOOL	COUNSELOR

	COURSE CODE			FIRST TERM (Fall) Title of courses-in numerical order of code nos.	CREDITS	DEPT. HEAD OR TEACHER	
						I APPROVE	I DO NOT APPROVE
1.							
2.							
3.							
4.							
5.							
6.							
7.							

	COURSE CODE			SECOND TERM (Spring) Title of courses-in numerical order of code nos.	CREDITS	DEPT. HEAD OR TEACHER	
						I APPROVE	I DO NOT APPROVE
1.							
2.							
3.							
4.							
5.							
6.							
7.							

Changes may be made in this program only in cases of clearly altered educational objectives or summer work – consult counselor.

Parental Approval

School Approval

Appendix E: Suggestions to Teachers

These were written on a daily basis and contained specific suggestions, comments, ideas, examples, or instructions intended to be helpful in conducting the class for that day.

SUGGESTIONS TO TEACHERS ON TEACHING THE DECISION-MAKING UNIT

Daily Outline

Day

1. Decision-making (task outlined--handout card) Chapter 1
2. Information Chapter 2
3. Testing (RVP)
4. Testing (VSCI)
5. Interpretation and prediction Chapter 3
6. Test Data Feedback
7. Test Data Feedback
8. Experience Tables Appendix A
9. Newton requirements and opportunities (start cards) Appendix B
10. Same
11. Case: Self
12. Parent

    Chapter 4

13. Teacher
14. Peers
15. Complete cards
16. RVP--retest

Introduction

The Information System for Vocational Decisions is a project sponsored jointly by the Harvard Graduate School of Education, Newton School Department, and New England Education Data Systems. It is funded by the U. S. Office of Education under Section 4 (c) of the Vocational Educational Act of 1963.

The Information System is designed to facilitate "purposeful behavior" by furnishing three kinds of services to students:

1. Instruction in decision-making.
2. Supervised experience in making decisions.
3. Accurate and comprehensive information about occupations, educational opportunities, and students, including the individual user.

Eventually it is planned to use computerized systems to aid in meeting these objectives. In the meantime, in order to gain appropriate experience, a unit on decision-making has been developed which may be utilized in a traditional teaching setting. These aspects of the design are worth noting:

1. The unit is "task-oriented"--built around an important task which all students must fulfill. In this case the task is filling out the tenth grade registration card for Newton High School.
2. The unit combines the very general approach used by Martin Katz in his booklet, "You, Today, and Tomorrow," with the very specific approach used in booklets produced in Palo

Alto, California, "You Decide Now" and "Invitation to Decision." A general model of decision-making is combined with experience tables based on Bigelow Junior High School students who have gone on to Newton High School.

3. The objective of providing supervised experience will be met by having students fill out a sample registration card for each of four cases. To stimulate consideration of his on criteria for choice, each student will complete an instrument which will help him make explicit his own criteria for choice. Comparison of the four statements of criteria for choice will aid in the consideration of issues when the student completes his own registration card.
4. A kit of occupational information will be available in each homeroom for use by all students. Students will be encouraged to investigate the educational implications of occupations in which they are interested. The simple classification scheme of "people, ideas, and things" will be used as developed by Science Research Associates in their "Widening Occupational Roles Kit."
5. A booklet, "You, the Decider," has been written for student use. It will serve as a major resource for students in learning about decision-making, information, and test interpretation. Provision has been made to include a variety of "handouts" in the booklet which is in a loose-leaf notebook.
6. Test and achievement data will be given to students.

Day 1: The Decision-making process.

1. "Decision-making" is a conscious process which can improve one's ability to command his life.

2. Some decisions are completely personal, do not involve anyone else. (Personal in making them, not in carrying them out) Some are joint decisions involving influence of others and dependent on cooperation of others for their success. Some are made for us by others; we are not "free" at all. In one sense we could say that these latter ones are not decisions at all because the consequences are so serious as to prevent a "normal" person from freely deciding. Get students to suggest examples of each of these three "kinds" of decisions.

3. Decision-making begins with awareness of a decision-point coming up for the person in the future. It may then proceed through the stages of:

Exploration

Evaluation

Choice

Clarification

This part of the decision-making process ends with the commitment of energy to one of the alternative courses of action.

4. The specific set of decisions to be considered as central to this unit is involved in filling out the Registration Card for Newton High School. Samples of this card should be passed out and the process briefly explained.

Curriculum choice.

Course selection: required and electives.

Approval of teachers and parents.

April 7 deadline.

Day 2: Information

1. Highlight necessity for information in decision-making, utilize examples of common decisions which the students can readily identify with, and discuss the information needed to make these more common decisions.

2. Discussion can lead to the curriculum decision facing the students. What kinds of information do the students think that they need in order to decide on a tenth grade program?

3. This information can be categorized as inside or outside information.

4. Inside Information:

    --differentiate abilities, interests, values

    --in terms of students' abilities, can discuss self-concept vs. "reality" (importance of what they think of themselves and the importance of this in decision-making)

    --Sources of information about abilities: grades, test scores, and so forth. These are really "outside" information which gets internalized and becomes "inside" information.

    --Can the students see any clustering of their interests after filling out page 24 of the booklet?

    --Chart on page 32 can be used to show how abilities, interests, and values overlap and interrelate.

5. Outside Information

    --may bring in the area of occupational information here (may be able to elicit interest on kit in homeroom).

    --also educational information for college or other post high school catalogues.

Day 3: Testing with the RVP (Readiness for Vocational Planning). Directions for administering the RVP are included with the instrument itself. Results will not be shared with the students since the "test" is being given only for our research design. We expect students to have difficulty with it on the first administration since they are probably not too familiar with the educational options open to them. You may help students with the meanings of specific words but do not give answers to questions on the RVP even as examples. Students should be allowed the full class period to complete the instrument. If some have not finished in that time, they should be allowed to complete it later during an activity period.

Please turn in the completed copies to the Guidance Secretary.

Day 4: Administration of the "Self-rating of Interests, Values, Abilities." Be sure that you have two separate "Self-rating Scoring Sheets" for each student. Directions for taking this test are contained within the test itself. At every point where a response is required, directions are given. You should be sure that all students understand the distinction between "Comparison with others" and "Self-rating."

Have each student keep one of the scoring sheet copies and the entire test booklet for his own notebook. Please turn the other scoring sheet in to the Guidance Office.

Day 5: Suggestions for Chapter 3

1. Standardized Tests: It's important that the students understand the "fallibility" of one standardized test score by itself. Stressing the use of these scores along with other kinds of outside and inside information will help the students be more realistic about these test scores and themselves.

The STEP Tests: emphasize that these are tests that actually measure achievement as well as ability and that the skills measured can be improved.

Intelligence Test Scores: point out that the "intelligence" measured by tests of this kind cannot be clearly separated from certain kinds of ability and achievement in school work (e.g., reading skills). Also that there is no test that can directly measure intelligence. Play down idea of an "I.Q." which tells them "how smart they are."

2. Test Interpretation: Although the booklet itself describes the terms (percentiles, quartiles, norm groups) in some detail, it would probably be helpful to go over these carefully in class since they are integral to the problem of test interpretation. Point out also the variations between local and national percentiles and norm groups.

3. Prediction and Decision-making: Need to be aware of the differences between group prediction and predicting for a particular individual. An individual may overcome a poor prediction if he applied a great deal of energy and time to achieve a goal which he strongly desires.

Days 6 and 7:

On day 6 the sheet titled "Some Personal Facts" should be distributed to your division. It is important to recognize that this will be the first time that many of the students will receive objective data about their "intelligence." As you know, we have provided six descriptions (local and national norms for grades three, six, and eight) so that students will not have one number to "latch onto" in an unrealistic fashion. This should help you to follow up on material from Day 5 in which principles of test interpretation were introduced. (For example: the actual number score received on a test will vary from one test administration to another so that the best estimate of a "true" score is probably the average of as many scores as possible.)

Provision should be made for students to ask as many questions as they want and in a "hypothetical" mode if they so desire.

Relationships between test scores, self-rating scores, and achievement may be pointed out and discrepancies explored. For example, a student may have rated himself at the 75th percentile on verbal ability, may have a STEP Reading score at the 33-54 band (local percentile), 73-88 band (national percentile), and have English and Social Studies marks that range from B- to C-. This is the kind of relationship which should be fruitful when discussed at some length with the students. You will no doubt be able to think of many other sets of relevant relationships, as will the students if they are encouraged to do so.

Your own attitude toward test scores is very important in discussing them with students. Somewhere between blind faith and outright rejection is a balanced perspective which sees test scores as one kind of evidence contributing toward a self-concept on the dimension under discussion.

Please tell the students that you will discuss their test scores with them personally, if they wish, or refer them to the counseling staff if this seems desirable.

Day 8: Experience Tables

A short explanation on the interpretation of experience tables will accompany the tables. However, this explanation is not exhaustive, and some class time should be spent on the procedures for reading the tables. Actually drawing a table on the board and going through it carefully should clarify for the student how to use an experience table.

It should be pointed out that these tables are representing how groups of students from Bigelow have done in the past. A student with high commitment or strong goals may overcome a negative prediction by expending time and energy.

In using experience tables as a source of outside information, the students should be cautioned as to the size of the group on which they are based (130 students) and the recency of the information (7 years ago).

Days 9 and 10: Newton Requirements and Opportunities

Two documents will be used to explain the specific Newton situation:

1. "Opportunities in Secondary Education." Published each year by the Newton High School.
2. Appendix B. Excerpts from Special Bulletin 13 which describes all courses open to tenth grade students at Newton High School. (The original Bulletin 13 describes all courses at Newton High School.)

Students need to understand the following terms that are freely used in connection with high school and college educational requirements but are often new to ninth grade students, particularly if their family is not "education oriented."

Semester/Fall term/Spring term
course
major course
minor course
credits
required course
elective course
prerequisite
curriculum
Curriculum I
Curriculum II
Curriculum Ia
Curriculum IIb
Curriculum III
Curriculum IIIT
house plan
homeroom assignment procedures
senior
junior
sophomore
unit
prepared subject
graduation requirements
college admission requirements
advanced placement
honors program
college boards
SAT (Scholastic Aptitude Test)
ACH (Achievement Tests)
department head
housemaster
language laboratory

science laboratory
time schedule (block system)

(Note: These are suggestions flowing out of our experience in these days and are meant to be helpful in our later evaluation and in the next time this unit is taught. Please give us a list of other terms which you feel should be included for consideration.)

Days 11 Through 14--Chapter 4: Cases in Point

As you know from our discussion last Monday the use of these cases is entirely optional. Four cases have been prepared for your use. Perhaps you could approach the cases from the point of view of their use in a "clarification" mode. Now that each student has come through "exploration" and "evaluation" to "choice," he should now be encouraged to "clarify" before and during the processing of the white registration card.

Each case consists of a prose description of a hypothetical person facing the same task that has been central throughout this unit--registration for grade 10 in Newton High School.

In using the cases we would suggest that you allow as much student discussion and interaction as possible. Encourage students to "identify" with the person and imagine what they would do in the same circumstances. End your use of the case by asking them to fill out a blue registration sheet for the person in the case. And finally, if you wish to contribute to some basic inquiry in the choice process (and again this is entirely optional) ask the students to fill out a "Basis for Choice" sheet. Directions are contained on a separate attachment.

Day 15:

Since the processing of the registration cards will be completed by this day, we would like to use the 15th period for student evaluation of the entire decision-making unit. An evaluation "instrument" ("pass the scapel") is being prepared for all students to complete. And while we are speaking of "evaluation" please try to write down all pertinent ideas you may have for improving this unit. We will talk with you later about how we intend to "pick your brains" for the benefit of future editions.

Day 16:

Retest with the RVP. Try to get all students to complete the RVP within the class period. If some cannot, collect the RVP and then give it to them again during an activity or homeroom period. Turn in the completed forms to the Guidance Office.

Appendix F: Data Given to Students

A data sheet entitled "Some Personal Facts" was prepared for each ninth grade student at Bigelow. The data was taken from official records and prepared by David Clemens' staff. Originally the intelligence score was reported as a percentile but an administrative decision was made by Dr. Landy to report it as a quartile in order to reduce the apparent specific differences between individual students, and to reduce the possible misuse of test scores by students and their parents.

For many students this was the first experience in receiving "intelligence" test scores.

INFORMATION SYSTEM FOR VOCATIONAL DECISIONS
55 Brattle Street
Cambridge, Massachusetts 02138

SOME PERSONAL FACTS

Name: ____________________ Division: ____________________

These data were obtained from your official records. You can use these facts to help you in this decision-making unit. If you find any mistakes on this sheet, please let your teacher know.

School Marks:	7th Grade (year average)	8th Grade (year average)	9th Grade (marking periods)
English			
Social Studies			
Science			
Mathematics			
French			
Home Economics			
Industrial Arts			

Intelligence Test Scores:	3rd Grade		6th Grade		8th Grade	
	*lopr	**napr	lopr	napr	lopr	napr
First Quarter						
Second Quarter						
Third Quarter						
Fourth Quarter						

*lopr: local percentile **napr: national percentile

STEP scores: (Sequential Tests of Educational Progress) taken in 8th grade

	local percentile band	national percentile band
Reading		
Mathematics		

STEP scores see the appropriate sections of the decision-making booklet.

Appendix G: Testing Instruments (Cont'd)

Student Evaluation Sheet:

For a description of this instrument phase turn to pages 5 and 6 of the project report, "A Task Oriented Course in Teaching Decision-Making" to which this Appendix is attached.

Appendix G: Testing Instruments

Readiness for Vocational Planning:

Originally developed by Warren Gribbons as a verbal, individually administered instrument, the "RVP" was adapted to a paper-and-pencil, group test by Eugene Wilson. The only changes made were those required to make sense in taking the test in the paper and pencil mode. The content of all 47 questions remains as originally developed.

Self-Rating of Abilities, Interests, and Values:

This instrument was adapted by Eugene Wilson from Robert P. O'Hara's "Vocational Self-Concept Index". The major revision involves the omission of Super's "Work Values Inventory" scales, since that instrument had previously been withdrawn from the market due to inadequate reliability. Descriptions of the Values scales were rewritten extensively to make them more understandable to ninth grade students. A separate answer sheet was dispersed throughout the test.

Basis for Choice:

This instrument was developed by Eugene Wilson to provide a means for making explicit one's criteria for choice. A semi-structured approach was used in which certain categories are presented to the student who must then furnish a specific example of a factor which was considered in making that choice. The second axis provides a means for ranking the relative effect of the opinions of the students "significant others".

This instrument was developed for use in this project and no data exists for comparative purposes at this time.

GROUP RVP
(Gribbons RVP revised by Wilson)

Name: ______________________ Date: ______________________

Directions: Please write as complete answers as possible to the follow-questions. If you need more space, use the back of the pages. If you don't understand what is expected of you, please ask. There is no time limit, but you should answer about one question per minute to finish within the class period. You may begin.

1. In this school system what curricula are there that you can take next year? ______________________

2. What curriculum do you plan on choosing for next year? ______________________

3. What made you choose this curriculum? (refer to question #2) ______________________

4. Why did you not choose another curriculum? (Discuss one of the others specifically.) ______________________

5. Why did you not choose another curriculum? (Discuss one of the others specifically.) ______________________

6. Is there any advantage to taking the college curriculum? ______________________

7. Is there any advantage to taking the other curriculum? ______________________

8. What subjects must everyone who chooses your curriculum take? ______________________

9. What made you decide to take general math (or algebra)? ______________________

10. Is there any advantage to taking algebra? ______________________

11. What facts should you know about yourself before you choose a curriculum? ______________________

12. How can you predict your chances of success in different courses for next year? ______________________

13. Do you expect to finish high school? ______________________

13a. How much school do you plan after high school? ______________________

14. What occupations have you thought about as your possible life work? List three choices.

1. ______________________
2. ______________________
3. ______________________

15. Why would you like to become a ______________________(your first choice)? ______________________

16. Why would you like to become a ______________________(your second choice)? ______________________

17. Why would you like to become a ______________________(your third choice). ______________________

18. What facts should you know about yourself before choosing an occupation? ______________________

19. How much education is required to be a ______________________(your first choice)? ______________________

20. What does a ______________________(your first choice) do at work? ______________________

21. Is your choice of high school subjects suitable for becoming a ________________________(your first choice)? ________________________

22. Is your choice of a curriculum suitable for any other occupation in case you cannot become a __________________________(your first choice)?
____

23. What connection do you see between the subjects you'll be taking next year and the work you want to do later on? ______________________
____
____

24. Discuss your scholastic abilities, that is, your strong and weak points in school. ____
____
____

25. Which abilities do you have that will help you to be successful in your program for next year? ____
____
____

26. Which abilities do you lack that you feel would help you to be successful in your high school program? ________________________________
____

27. Which abilities do you have that will help you in the work you are planning? ____
____

28. Which abilities do you lack that you feel would help you to be successful as a ________________________________(your first choice)? ____
____
____

29. Please check your opinion of your verbal ability. (Compare yourself with your classmates.)

_____ top quarter: you are more capable than at least 75% of your classmates
_____ second quarter: you are ahead of 50% but at least 25% are more able than you
_____ third quarter: you are above 25% but 50% are above you
_____ bottom quarter: at least 75% have more verbal ability than you

30. Please indicate your opinion of your numerical ability. (Compare yourself with your classmates.)

_______ top quarter: you are more capable than at least 75% of your classmates
_______ second quarter: you are ahead of 50% but at least 25% are more able than you
_______ third quarter: you are above 25% but 50% are above you
_______ bottom quarter: at least 75% have more numerical ability than you

31. How do you feel about your general scholastic ability? (Compare yourself with your classmates.)

_______ top quarter: you are more capable than at least 75% of your classmates
_______ second quarter: you are ahead of 50% but at least 25% are more able than you
_______ third quarter: you are above 25% but 50% are above you
_______ bottom quarter: at least 75% have more general scholastic ability than you

32. On what did you base your estimate of your verbal ability? __________

33. On what did you base your estimate of your numerical ability? _____

34. On what did you base your estimate of your general scholastic ability?

35. Discuss your interests, that is, the kinds of activities you like or dislike. __________

36. What particular interests and activities would your occupation satisfy? (your first choice) __________

37. What are some other interests of a __________________ (your first choice)? __________

38. What interests do you have that will not be satisfied by your occupation as a ____________________ (your first choice)? ____________
____
____

39. Values concern things that determine what a person will do when faced with a difficult choice. For example, if a person values prestige above money, he may become a teacher rather than a plumber although the plumber would probably make more money. His attitude toward prestige and money are called values. List some of your most important values.
____
____
____

40. What values of yours would working as a ________________ (first choice) satisfy? ____
____

41. What values of yours would not be satisfied in your occupation as a ____________________ (your first choice)? ____________________
____

42. Which of your values will conflict with one another in your choice of an occupation? ____
____
____

43. We're interested in how students make up their minds about courses and would like you to share some of the things you've gone through. Can you state how you decided on ____________________ curriculum? ____
____
____
____

44. Where did you get your information? ______________________
____
____

45. How do your parents feel about your occupational choice? ________
____
____

46. Suppose your parents didn't agree with your plans. What would you do? ____
____

47. Who do you feel should be responsible for your occupational choice?
____

SELF-RATING OF INTERESTS, VALUES, ABILITIES

Interests are things you like or think you would like to do, whether you do them or not. For example, you may like to play tennis but seldom take the time to do so. Values concern things that determine what you actutually will do. An example: you don't like to take out the garbage but know you have to if your father says to. In this case you value obeying your father more than you dislike the work. Abilities describe what you can do. There are many different abilities, such as running, kicking a football, threading a needle, reading, writing, speaking well in a group.

Directions: You are asked to read the following descriptions of interests, values, and abilities, and then rate yourself on each of them. If you have any questions about the meaning of any one of them, feel free to ask the person in charge.

After you have read a description, rate yourself on it in two ways on the accompanying scoring sheet.

1. Comparison with others. Compare yourself with others of about your same age for each description. For example, if you feel that your "artistic" interest is greater than about three-fourths of the people of your age, circle the "75" under the "comparison with others" for artistic interest.

2. Self-ranking: When you have completed all ten of the interests you will then rank the three that are the most important to you. For example, if you feel that helping people is your most important interest, you would put a "1" opposite "social service" in the Self-ranking column. Of the nine remaining, if you consider solving problems the strongest

interest, you will rank "scientific" "2." Then of the eight remaining interests you will rank the most important "3."

After completing the "interests" you may work on the "values"and "abilities" sections. Note that you are not asked to rank "intelligence."

INTERESTS

OUTDOOR interest means that you prefer work that keeps you outside most of the time and usually deals with animals and growing things. Forest rangers, naturalists, golf course greens keepers are among those high in outdoor interests.

MECHANICAL interest means you like to work with machines and tools. Jobs in this area include automobile repairmen, electronic technicians, drill press operators, and engineers.

COMPUTATIONAL interest means you like to work with numbers. A high score in this area suggests that you might like such jobs as bookkeeper, accountant, bank teller, statistician, or computer programmer.

SCIENTIFIC interest means that you like to discover new facts and solve problems. Doctors, chemists, nurses, engineers, radio repairmen, aviators, and dietitians usually have high scientific interests.

PERSUASIVE interest means that you like to meet and deal with people and to promote projects or things to sell. Most actors, politicians, radio announcers, authors, salesmen, teachers, and store clerks have high persuasive interests.

ARTISTIC interest means you like to do creative work with your hands. It is usually work that has "eye appeal" involving attractive design, color, and materials. Painters, sculptors, architects, dress designers, hairdressers, and interior decorators all do "artistic" work.

LITERARY interest shows that you like to read and write. Literary jobs include novelist, historian, teacher, actor, news reporter, editor, poet, drama critic, librarian, and book reviewer.

MUSICAL interest shows you like going to concerts, playing instruments, singing, or reading about music and musicians.

SOCIAL SERVICE interest indicates a preference for helping people. Nurses, Boy or Girl Scout leaders, vocational counselors, tutors, minister, personnel workers, social workers, and hospital attendants spend much of their time helping other people.

CLERICAL interest means you like office work that requires precision and accuracy. Jobs such as bookkeeper, accountant, file clerk, salesclerk, secretary, statistician, and traffic manager fall in this area.

VALUES

Earlier we said that values concern things that determine what a person actually will do when faced with a difficult decision. It is important to understand that values are almost always relative to the circumstances of the choice situation and may not hold in another situation, e.g., one may value obedience highly in one situation but consider it less highly in another situation. A person is not always 100% Theoretical or always Religious. He may be both Social and Aesthetic, Political and Economic. The following "values" are really ways of thinking that characterize people; that is, some people are always more Theoretical than others, etc., but this does not mean that at the same time they do not also function in Religious or Economic ways.

THEORETICAL: "I just want the facts," is characteristic of the person who tends to be Theoretical. Understanding How and Why something works is more important than what it does or whether it is "beautiful" or "useful." By using a Theoretical way of thinking, he is concerned and able to organize facts and understand them better. All kinds of people use the Theoretical way of thinking, but if it becomes, in itself, very important to a person, he is likely to be involved in the planning, research, or teaching phases of his occupation.

ECONOMIC: As men try to satisfy their needs through the use of natural resources and human energy, they function in Economic ways. To be "economical" means to make the most of what one has or to get greatest value out of one's resources. Economics involves people in working, buying and selling. Worth is the most important aspect of the economic way of thinking. For example, a forest of redwood trees might be considered as beautiful, but a lumber salesman would probably sacrifice its beauty, cut the trees down, and sell the lumber.

AESTHETIC: People are able to react to colors, smells, forms, sounds, or ideas as "beautiful" or "disgusting" rather than as "useful." When they do this, they are reacting Aesthetically. Aesthetic reactions are normally associated with music, painting, poetry, and sculpture, but may also involve human relationships, ideas, or natural phenomena.

SOCIAL: People are inherently social beings; that is, they need contacts with other people, that is, as members of a particular family, church, community or nation. Some people are more interested in other people than in things or ideas. "People who need people, are the luckiest people in the world" describes one songwriter's valuing of the Social experience. Being kind, sympathetic, and helpful to others and being loyal to one's friends are characteristic of the Social experience. Being most happy or contented when helping others, leads such people into working as teachers, counselors, social workers, personnel directors, and Peace Corps volunteers.

POLITICAL: When two or more people live or work together, their individual desires may conflict. Efforts to control or influence each other for the common good may be called Political. Some people like to control others and to achieve fame and fortune through exercising this control through leadership in governmental, business, or educational institutions.

RELIGIOUS: The Religious experience involves seeking guidance and understanding about oneself in relation to the world and the universe from an eternal guiding spirit, creator, or God. Religion deals with certain basic questions such as the origin and nature of man and the purpose of the universe. Some people are able to seek answers to these questions on their own while others are attracted to organized religious programs in churches, synagogues, or other places of worship.

IMPORTANT ABILITIES

VERBAL REASONING is the ability to think or reason using words as symbols. It is important in reading and in understanding language. Most students with high verbal ability are able to do well in English and Social Studies and other subjects based on reading. If they don't, it is more likely to be because they don't like school or they spend a lot of time thinking about other things.

NUMERICAL ABILITY is used in thinking about numbers. If a person can add, subtract, multiply, and divide numbers quickly, he usually has high numerical ability. Subjects using numerical ability are arithmetic, modern math, algebra, and to some extent science.

SPACE RELATIONS means the ability to think in three dimensions or to be able to imagine a finished object from its pattern. Most boys can visualize the pistons, connecting rods and crankshaft inside a motor. Many girls can imagine a finished dress from looking at the pattern. If they can, they have high space relations ability. Space relations is important in drawing or reading blueprints, visualizing a burst appendix before the operation, or imagining a new model car to be built.

MECHANICAL REASONING is involved in understanding how any mechanical device works. If you understand the relationship between the weights and distances of two children playing on a see-saw, you probably have some mechanical reasoning ability.

INTELLIGENCE refers to the capacity we have for learning. It involves acquiring and retaining new knowledge but also responding successfully to new situations or problems by utilizing past experience or knowledge. A person may be considered to be acting with Intelligence when he uses reason to solve problems and direct his actions effectively.

INFORMATION SYSTEM FOR VOCATIONAL DECISIONS
Harvard Graduate School of Education
Cambridge, Massachusetts 02138

SELF-RATING SCORING SHEET

Name: ______________________ Date: ______________________

	Comparison with Others	Self Ranking
Interests:		
Outdoor	1.....25.....50.....75.....99	
Mechanical	1.....25.....50.....75.....99	
Computational	1.....25.....50.....75.....99	
Scientific	1.....25.....50.....75.....99	
Persuasive	1.....25.....50.....75.....99	
Artistic	1.....25.....50.....75.....99	
Literary	1.....25.....50.....75.....99	
Musical	1.....25.....50.....75.....99	
Social Service	1.....25.....50.....75.....99	
Clerical	1.....25.....50.....75.....99	
Values:		
Theoretical	1.....25.....50.....75.....99	
Economic	1.....25.....50.....75.....99	
Aesthetic	1.....25.....50.....75.....99	
Social	1.....25.....50.....75.....99	
Political	1.....25.....50.....75.....99	
Religious (optional)	1.....25.....50.....75.....99	
Abilities:		
Verbal Reasoning	1.....25.....50.....75.....99	
Numerical Ability	1.....25.....50.....75.....99	
Space Relations	1.....25.....50.....75.....99	
Mechanical Reasoning	1.....25.....50.....75.....99	
Intelligence	1.....25.....50.....75.....99	

INFORMATION SYSTEM FOR VOCATIONAL DECISIONS
Harvard University
220 Alewife Brook Parkway
Cambridge, Massachusetts 02138

Directions for filling out a BASIS FOR CHOICE sheet.

1. Your name: Write in your own name.

2. Case of: Write in the name of the person in the case you are studying.

3. Date: Today's date.

4. Choice being considered: In the process of filling out a Registration Card for a particular case many choices were made. Select the one choice you feel was the most important for this case and write it in for item #4.

5. Factors considered: Under the appropriate headings write in the factors which you felt were the most important in this case. Write in as many as you wish but don't feel that you must fill every category. If you want to write in a factor that doesn't seem to fit any of the other headings, put it in under "other."

6. Opinions: For each factor you wrote in under #5, indicate whose opinion about that factor was most important by writing in "#1." Next in importance would be #2. Again, don't feel you have to use all the categories.

For example: In the case of "Pam," the most important choice might be that of Curriculum (I, II, IIB, III or IIIT). For this choice you may feel that the following factors were actually considered in the choice: "general scholastic ability," "education: going to college," "art teacher."

Next consider the importance of opinions in relation to each factor. You might feel that they should be ranked in importance in this way:

Abilities:	Self	Parents	Teachers	Friends
"general scholastic"	1	3	2	4
Values:				
Education: college	2	1		3
Goals:				
Art teacher	2	3	1	

INFORMATION SYSTEM FOR VOCATIONAL DECISIONS
Harvard University
220 Alewife Brook Parkway
Cambridge, Massachusetts 02138

BASIS FOR CHOICE

1. Your name________________ 2. Case of ____________ 3. Date _________

4. Choice being considered____

5. Factors considered	6. Opinions				
	Self	Parents	Teachers	Friends	Other (Specify)
Abilities:					
Interests:					
Values:					
Achievements:					
Goals:					
Other:					

INFORMATION SYSTEM FOR VOCATIONAL DECISIONS
Harvard University
220 Alewife Brook Parkway
Cambridge, Massachusetts 02138

STUDENT EVALUATION OF DECISION-MAKING UNIT

Name________________________________ Division____________________

Directions: We are interested in your frank evaluation of the unit in decision-making. Use the following items to tell us how you feel about it but do not let them limit your evaluation. Go beyond the items and comment on all aspects of the unit which you feel deserve attention. Turn in this evaluation sheet to your homeroom teacher when you have completed it. Thank you!

1. A "decision-point" involves (1A1)

___a. a time when a decision must be made.
___b. at least four possible alternative courses of action.
___c. putting off a decision.
___d. all of these (a, b, and c).
___e. none of these (a, b, and c).

2. The question, "What subjects do I have to choose from?" involves the stage of (1A2)

___a. "exploration".
___b. "evaluation".
___c. "clarification".
___d. all of these (a, b, and c).
___e. none of these (a, b, and c).

3. The stage of "evaluation" consists of (1A3)

___a. finding more alternatives.
___b. eliminating all the alternatives except one.
___c. linking information about the person to each alternative.
___d. all of these (a, b, and c).
___e. none of these (a, b, and c).

4. The stage of "choice" is (1A4)

___a. a part of "exploration".
___b. the same as "decision".
___c. always followed by "evaluation".
___d. all of these (a, b, and c).
___e. none of these (a, b, and c).

5. "I am going to take a business major, but I guess I'll look (1A5) at the courses again to make sure" is a statement which illustrates the stage of

___a. "exploration".

___b. "evaluation".

___c. "crystallization".

___d. all of these (a, b, and c).

___e. none of these (a, b, and c).

6. An "alternative" is

___a. a course of action open to a person.

___b. a stage in the decision-making process.

___c. a measure of a person's motivation.

___d. all of these (a, b, and c).

___e. none of these (a, b, and c).

7. A person's capacity to use numbers as symbols is an example (1A7) of

___a. an "interest".

___b. an "ability".

___c. a "value".

___d. all of these (a, b, and c).

___e. none of these (a, b, and c).

8. A person's "interests" are related to what he (1A8)

___a. should do.

___b. can do.

___c. likes to do.

___d. all of these (a, b, and c).

___e. none of these (a, b, and c).

9. A person's "values" are related to what he (1A9)

___a. should do.

___b. can do.

___c. likes to do.

___d. all of these (a, b, and c).

___e. none of these (a, b, and c).

10. When a person takes a "standardized" test the score he receives (1A10)

___a. is his "true" score.
___b. is not to be trusted.
___c. is right since the test is standardized.
___d. all of these (a, b, and c).
___e. none of these (a, b, and c).

11. A "percentile" shows where a person stands in relation to (1A11)

___a. his plans.
___b. a norm group.
___c. his teachers.
___d. all of these (a, b, and c).
___e. none of these (a, b, and c).

12. A "norm" group consists of (1A12)

___a. all of the students in a particular grade.
___b. all students in the top half of their class.
___c. a group whose scores are used to standardize a test.
___d. all of these (a, b, and c).
___e. none of these (a, b, and c).

13. Knowing which "quartile" ones score falls in is helpful in (1A13)

___a. placing ones self in relation to the norm group.

___b. learning more about ones self.

___c. making plans that may be relevant to that score.

___d. all of these (a, b, and c).

___e. none of these (a, b, and c).

14. A "curriculum" is (1A14)

___a. a word used to indicate the level of difficulty of a course in the high school.

___b. a suggested program of courses planned to meet certain objectives.

___c. all of the planned learning activities in a school.

___d. all of these (a, b, and c).

___e. none of these (a, b, and c).

15. The word "required", when applied to high school courses, (1A15)
designates

___a. all of the courses essential for meeting graduation requirements.

___b. only the courses required by law.

___c. the courses which must be taken by everyone in a given curriculum.

___d. all of these (a, b, and c).

___e. none of these (a, b, and c).

16. An "elective" course (1A16)

___a. may be taken by anyone.

___b. is one which may be chosen by someone who meets the prerequisites.

___c. has to do with learning about elections.

___d. all of these (a, b, and c).

___e. none of these (a, b, and c).

17. "Curriculum I" designates those courses that are designed (1A17)

to prepare one for

___a. the SAT's.

___b. advanced placement.

___c. the SAT's and Achievements.

___d. all of these (a, b, and c).

___e. none of these (a, b, and c).

18. "Curriculum II" courses prepare one for (1A18)

___a. any liberal arts college.

___b. colleges that do not require the achievement tests.

___c. only business or technical schools.

___d. all of these (a, b, and c).

___e. none of these (a, b, and c).

19. Current use of the term "occupational choice" stresses the idea that it is (1A19)

___a. a complex process occuring over a considerable period of time.

___b. the single most important choice a person ever makes.

___c. imperative to have a college degree to enjoy success in an occupation.

___d. all of these (a, b, and c).

___e. none of these (a, b, and c).

20. In the booklet, "You, The Decider", values were defined as having to do with what a person (2A3)

___a. can do.

___b. actually does.

___c. wants to do.

___d. has the opportunity to do.

21. To what extent do you think you would actually use the decision-making model if you were faced with each of the following decision-points? (Circle the appropriate word.) (1B1)

Decision-point	Extent of Use		
a. To go to college	none	some	a lot
b. To accept a part-time job	none	some	a lot
c. To choose an occupation	none	some	a lot
d. To go out for baseball	none	some	a lot
e. To take five major courses	none	some	a lot
f. To date someone for the first time	none	some	a lot
g. To take Curriculum I English	none	some	a lot
h. To work this summer as a camp counselor	none	some	a lot
i. To go to Newton Technical High School	none	some	a lot
j. To enroll in Newton's work study program	none	some	a lot

22. Which of the following statements involve interests, rather than abilities or achievement? (You may check more than one item.) (2A2)

___a. "I can't stand to think of sitting at a desk all day pushing a pencil!"

___b. "In spite of my poor grades on my last report card, I know I can do better in English."

___c. "Having a goal helps me to do better in my courses."

___d. "As I think of next year's program I feel that I must include some kind of musical activity since it provides so much enjoyment for me."

23. Please evaluate the following materials which you received by placing a check mark in front of all the statements with which you agree. (3A1)

Material	Evaluation
"You, The Decider"	___a. It was written very clearly. I had no trouble understanding it.
	___b. It might be good for grade ______ (specify) but it certainly wasn't for grade 9.
	___c. It was poorly written.
	___d. I have found it useful in many ways.
	___e. It seemed right for grade 9.
	___f. Reading it was a waste of time.
	___g. The examples in the booklet seemed real to me.
	___h. Whoever wrote that doesn't know much about kids.

Material	Evaluation (3A2)
The "Experience Tables"	___a. I had no trouble understanding their meaning. ___b. I understood them but they just weren't any use to me. ___c. For some reason I just couldn't relate that kind of information to myself. ___d. Perhaps this kind of information will be more useful to me later when I'm in high school.

Material	Evaluation (3A3)
The "RVP": Readiness for Vocational Planning (47 questions about education and occupation which you filled out twice.)	___a. This was the worst example of a "test" I've ever seen. ___b. The first time it was nonsense but the second time it made sense. ___c. Taking the RVP made me begin to think of the relationship between education and occupations. ___d. I'd like to know what my scores on the test were.

Material	Evaluation	(3A4)
Self-Rating of Abilities, Interests, and Values.	___a. I found it difficult to rate myself but I tried my best to follow the directions.	
	___b. I pretty much put down the first thing that came to mind.	
	___c. I wonder how close my self-ratings were to my actual test scores.	
	___d. I never did understand what a "value" is.	
	___e. I found it hard to understand the differences between "abilities" that were listed.	
	___f. I really had no basis for rating myself.	
	___g. I was able to use previous test scores to rate myself on "abilities."	

Material	Evaluation	(3A5)
"Some Personal Facts"	___a. Getting my own test scores didn't change any of my ideas about myself.	
	___b. Getting some "intelligence" test scores for the first time was helpful.	
	___c. This whole business of test scores is over-rated.	
	___d. Seeing my test scores helped me do a better job of planning my program for next year.	

24. The most important thing that I learned from the unit on decision-making was -- ______________________________ (G1)

25. If the unit on decision-making is to be taught again next year I would recommend that it be changed in the following ways: (G2)